AN ANALYSIS OF ATHLETIC TRAINING STATE PRACTICE ACTS AND THE DEVELOPMENT OF CRITERIA FOR A MODEL

By

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Barbara, this project is dedicated to you. Only you really understand. I love you.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF ABBREVIATIONS

AAHPER	American Association of Health, Physical Education, and Recreation
ACHA	American College Health Association
AMA	American Medical Association
APTA	American Physical Therapy Association
ATC	Athletic trainer, certified
CAHEA	Commission on Allied Health Education and Accreditation
CAS	Columbia Assessment Services
CSG	Council of State Governments
JRC-AT	Joint Review Committee - Athletic Training
NATA	National Athletic Trainers' Association
NATABOC	National Athletic Trainers' Association Board of Certification
NCAA	National Collegiate Athletic Association
NCLER	National Clearinghouse on Licensure, Enforcement and Regulation
NFSHSA	National Federation of State High School Associations
PEC	Professional Education Committee
PT	Physical therapist
SCI	Spinal cord injury

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AN ANALYSIS OF ATHLETIC TRAINING STATE PRACTICE ACTS AND THE DEVELOPMENT OF CRITERIA FOR A MODEL

By

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The purpose of this research was to analyze the effectiveness of athletic training legislation in protecting the public from harm. The study analyzed state government's existing public protection policies in regard to the athletic training profession. A further purpose was the development of criteria for model athletic training legislation.

Practice acts from the 26 states that regulated athletic training at the time of this study were obtained and a three-part analysis was conducted. In the initial qualitative analysis, a census of all the current athletic training practice acts was conducted. The practice acts were classified excellent, good, or moderate depending on the number of criteria identified in the legislation. The majority of states classified in the excellent category were states

that licensed athletic trainers, while all of the states that regulated through exemption were in the moderate classification.

The second phase of the analysis examined five research hypotheses to determine if legislation was effective in safeguarding the public welfare. Catastrophic injury data and regulatory board sanctions indicated a meaningful level of public protection afforded by athletic training legislation. However, professional liability insurance rates, initial justification for legislation, and legal case decisions did not indicate a greater potential for harm to the public without regulation. Those states classified as having excellent athletic training practice acts were most effective in protecting the public from harm. No trends could be established for those states in the good or moderate classifications.

The third phase of the research was the development of model athletic training legislation. Ten criteria were presented to facilitate the writing of an athletic training practice act which protects the public from harm. The criteria were developed by the researcher and validated by an expert jury. Based upon the criteria, and using the athletic training practice acts classified as excellent in the earlier phases of the research, model statutes for an athletic training practice act were presented.

CHAPTER I
INTRODUCTION

Athletic training is defined as the prevention, care, management, and rehabilitation of athletic injuries. The National Athletic Trainers Association (NATA) was formed in 1950 and has seen a tremendous growth in membership since its inception. Recently, the NATA began a process of credentialing the membership by means of a national certification examination. A view held at that time was that certification was necessary in order to promote the profession of athletic training, as well as to promote the NATA.

Additionally, the NATA has strongly encouraged state athletic training organizations to pursue state regulation for the profession. This is evidenced by the formation of the Licensure Committee by the NATA. This was subsequently called the Governmental Affairs Committee, but the committee's charge was still the same--to encourage and facilitate state athletic training organizations in seeking state regulation.

The legislature in the state of Texas passed the first bill to regulate the practice of athletic training in 1973. At the time of this research study, there were 26 states

that had some type of legislation to regulate athletic training. However, there was a significant disparity among the regulations of the various states. Twelve states regulated through licensure laws, 5 states required certification, 5 states exempted athletic trainers from other health profession acts, and 4 states had registration requirements for athletic trainers. The NATA has continued to encourage state regulation of the athletic training profession.

Vertiz (1985) stated the power to license professions is derived from the United States Constitution and the constitutions of the various states. "This power is the police power in American constitutional law - the reserved or inherent power of the states to provide for the protection of public health, safety, and general welfare" (Vertiz, 1985, p.88).

Many professions are regulated by state occupational licensing laws in order to safeguard the public safety and welfare. Several allied health professions are among those most commonly regulated by state governments. The athletic training profession is included as one of those health-related occupational groups, currently regulated by practice acts in 26 states. However the effectiveness of occupational licensing in protecting the public from harm is no longer taken for granted.

Research Problem

The problem addressed in this research was to analyze if state regulation of the athletic training profession protects the public from harm. Harm was measured by injury statistics, personal liability insurance rates, state athletic training board sanctions, and legal case decisions.

Purpose of the Study

This research study analyzed state government's existing public protection policies in regard to the athletic training profession. The intent of this research was to analyze the effectiveness of athletic training legislation in protecting the public from harm. For the purpose of this study, harm was measured by injury statistics, personal liability insurance rates, state athletic training board sanctions, and legal case decisions. Because of the different types of state athletic training regulation, an assessment was done to determine if there are identifiable standards in legislation which make the practice act more effective in safeguarding the public welfare. A further purpose of this research study was the development of criteria for model athletic training legislation focusing on the protection of the public.

Hypotheses

The study involved the testing of the following research hypotheses:

H_1. There is no difference in catastrophic injury rates between those states that regulate athletic training and those that do not.

H_2. There is no difference between states that regulate athletic training and those that do not in level of harm to the public as measured by malpractice insurance rates.

H_3. There is no indication of harm to the general public as measured by the number of incidents referred to by the individual states in the initial legislation application or sunrise hearings.

H_4. There is no indication of harm to the general public as measured by the number of sanctions levied against athletic trainers by state regulatory boards.

H_5. There is no difference between states that regulate athletic training and those that do not in level of harm to the public as measured by the number of legal cases in which an athletic trainer was found negligent or liable.

Justification

Government has the charge of protecting the public health and welfare. State occupational regulation is one function of government for this purpose. This research

study provides a comprehensive, systematic analysis of the states' practice acts that currently regulate athletic training to determine their effectiveness in meeting that responsibility. The study also provides suggestions and recommendations regarding athletic training practice acts and model legislation.

Athletic training has made significant strides recently. Most notably, has been the official recognition of this field as an allied health profession by the American Medical Association (AMA) in 1990. In early 1992, the Council on Allied Health Education and Accreditation (CAHEA) Essentials and Guidelines for an Accredited Educational Program for the athletic trainer were adopted by the AMA Council on Medical Education. If, in fact, athletic training legislation is found to protect the public from harm, then it may be the opportune time to build on these recent advancements and strongly pursue state licensure for the profession. However, if state regulation has not proved to be the altruistic ideal it has been purported to be, then the efforts of those seeking licensure may be more efficiently redirected towards other goals.

Assumptions

The following assumptions were basic to the study.

1. The expert panel participating in this study made unbiased decisions regarding the classification of the state's athletic training practice acts.

2. The research centers and clearing-houses used sound research principles in collecting and reporting the catastrophic injury data that was used to determine public harm.

3. State athletic training regulatory boards were accurate and honest in reporting sanctions against athletic trainers in that particular state.

Limitations

Injuries are an inherent part of all sports activities, and athletic trainers cannot prevent every sports-related injury. Consequently, using injury statistics as indications of public harm are not totally accurate. However, the presence of an athletic trainer reduces the potential for significant injury (Roy & Irvin, 1983).

Delimitations

The delimitations for this study were as follows.

1. Injury data to determine public harm was delimited to catastrophic injury data. Other types of injuries may be of a significant nature, however they do not typically have the debilitating or long-term effects of a catastrophic injury.

2. Arizona, Colorado, Connecticut, Hawaii, and New Hampshire regulate athletic training by exemption from another allied health profession's practice act. Exemption

refers to a legislative act that relieves one occupation from violating another occupation's practice act. Because these five states do not have a state regulatory board for athletic training, there was not an agency to contact regarding initial justification for the legislation or sanctions against practicing athletic trainers.

3. The legal case decisions used to document public harm caused by athletic trainers were identified by computerized legal searches. There was no attempt to identify cases which were settled out of court.

Definition of Terms

For the purposes of this study, certain terms were defined as follows.

1. Athletic Training is the art and science of prevention and management of injuries at all levels of athletic activity. This includes injury evaluation, treatment, and rehabilitation (Booher & Thibodeau, 1989).

2. Catastrophic Injury is a trauma to the head and/or neck. Specific injuries include intracranial hemorrhage, craniocerebral death, cervical fractures/dislocations/ subluxations, and cervical spine injuries resulting in permanent paralysis (Torg, Vegso, & Sennett, 1987).

3. Certified Athletic Trainer is an allied health professional who has fulfilled the requirements for certification and passed the examination administered by the

National Athletic Trainers Association Board of Certification (Webster, Mason, & Keating, 1992).

4. Exemption is a form of state occupational regulation. Specifically, it refers to a legislative act that relieves one occupation from violating another occupation's practice act (Jetton, 1992c).

5. Licensure is a form of state regulation of a profession. It typically has the most rigorous standards and most stringent controls. It is often used synonymously with any form of state occupational regulation (Jetton, 1992a).

6. Meaningful shall be reported as an accepted difference of calculated percentages between analysis groups. This is based upon a similar analysis by Toy of building contractor licensing (Toy, 1989).

7. Nontraditional (clinical) settings are athletic training employment settings other than those affiliated with organized athletics. These include settings such as private clinics, hospitals, and corporate/industrial facilities (Arnheim & Prentice, 1993).

8. Practice act is legislation passed by a governmental body to define and regulate the scope of practice for a particular profession (Jetton, 1992b).

9. Sunrise hearing is a review conducted of proposed legislation to justify its enactment. The question of public protection is typically addressed in occupational

licensing (National Clearinghouse on Licensure, Enforcement and Regulation & The Council of State Governments, 1987).

10. Sunset hearing is a review of current legislation to justify its continuance or modification. The purpose is to assess government accountability. The number of complaints and sanctions is typically addressed in occupational licensing (National Clearinghouse on Licensure, Enforcement, and Regulation & The Council of State Governments, 1987).

11. Traditional (nonclinical) settings are athletic settings, particularly those in educational institutions such as high schools, colleges and universities, as well as professional athletics (Arnheim & Prentice, 1993).

CHAPTER II
REVIEW OF RELATED LITERATURE

Before examining state regulation and athletic training, the review of the literature will first define and identify the characteristics of what constitutes a profession. This will be followed by a discussion of licensing in general terms. Selected other health professions licensing efforts will then be presented in a historical context. The final section of the literature review will be an overview of the history of athletic training.

Professions

The definition of what determines a profession has received much study from sociologists, psychologists, and anthropologists, among others. Pavalko (1972) stated that professions represent both the repository of the most advanced, sophisticated knowledge and the mechanism for advancing that knowledge. Torstendahl (1990) claimed the theory of professionalism has to do with how knowledge and/or skill is used for problem solving capacity. This problem solving capacity gives prestige and power to the

possessors of the capacity, or in other words, the professional.

Wilensky (1964), in one of the earlier treatises on the professions, stated that an occupation passes through a consistent sequence of stages on its way to becoming a profession. First, there is the creation of a full-time occupation. The new occupational group likely will need to delineate its own position and face competition from other overlapping occupations and professions. This is followed by the establishment of a training school. In newer professions, university affiliation is concurrent with the establishment of training schools. Next is the formation of professional associations. The formation of such associations is often accompanied by a change in occupational title, attempts to define more clearly the exact nature of the professional tasks, and efforts to eliminate incompetent practitioners. As stronger associations are formed, political action attempting to secure licensing laws and protection from competing occupations becomes an important function. Wilensky suggests the final step in this professional maturation process is the formation of a code of ethics.

Greenwood (1972) stated that there are five elements that constitute the distinguishing elements of a profession. These are (a) systematic theory, (b) authority, (c) community sanction, (d) ethical codes, and (e) a

culture. Systematic theory means that the profession's knowledge is based upon a body of theory. Acquisition of professional skill requires a prior or simultaneous mastery of the theory underlying the skill. Professional authority is the knowledge base in the systematic theory. This authority is typically gained through extensive education. Community sanction refers to the approval of the public. Community approval may be informal or formal. Formal approval includes the granting of a license. The communities' police power enforces the licensing system. The sanction gives a degree of status and prestige. The profession's ethical code is part formal and part informal. This code regulates and oversees the conduct and behavior of the professional in colleague-colleague and client-professional relations. The professional culture includes a network of groups. These can include, but are not limited to, professional associations, centers of training and education, institutionalized settings, and clusters of colleagues. The culture of a profession includes its values, norms, and symbols. Goode (1972) defined a profession as a community. The community is characterized by the following: (a) Members have a sense of identity. (b) Once in it, few leave; so there is a continuing or terminal status. (c) Members share common values. (d) The role definitions concerning both members and non-members are agreed upon and are the same for all members. (e) There is

a professional language. (f) The community has power over its members. (g) The limits to the profession are social and are reasonably clear. (h) The next generation of professionals is produced socially through the control over the selection of professional trainees and through the training process. Of course, professions vary in the degree to which they have these eight characteristics and the resulting communal identities.

More recent examinations of the characterization of a profession have been offered by Purtilo and Cassell (1981) and Abbott and Wallace (1990). Both of these discussions centered on allied health professions specifically. These authors claimed professional status is identified by three criteria. These are (a) maximal competence and/or knowledge in an area, (b) an ideology of altruism or providing some significant social value, and (c) a legitimate, socially recognized autonomy.

The professional's competence and knowledge is achieved through specialized education, often with long periods of apprenticeship or internship. Typically the extended training is necessary because the profession's knowledge is based upon specialized theories which underlie the technical skills. Hence a professional not only knows what to do and how to do it, but has a rationale for doing so.

A profession offers a service which is of some significant social value. Because this particular

professional characteristic is harder to document with objective data, it is often given less emphasis. In the health professions, however, the social value is fairly self-evident.

A distinctive aspect of a profession is that it is given autonomous, self-regulatory freedom. The profession itself is obligated to ensure that its members perform in a competent and appropriate manner. Consequently, professions have developed their own governing mechanisms which include certifying schools and training programs. Competence is also recognized by licensure and excluding others from practice by setting minimum standards for obtaining a license. While autonomy is crucial to the definition of a profession, it is not necessarily an absolute. For example, most allied health professions, including athletic training, establish their own standards and regulatory practices, but still rely on physicians for major diagnostic and therapeutic decisions.

Licensure

Rubin (1980) stated that licensure has become synonymous with professionalization. Licensing, as defined by Fortune (1985), is the act of authorizing an individual to do something that is regulated by law to protect the public health and safety. Licensure is enacted to assure the qualifications of new practitioners and to discourage

the incompetent or unscrupulous practice of the particular profession. Shimberg, Esser, and Kruger (1972) stated simply that licensing represents a legal right or privilege conferred by a government agency for an individual to engage in a profession.

Historically, the federal government has maintained a hands-off policy with respect to professional licensing. Except for a few limited transportation and communication occupations, licensing has been regarded as the domain of the states. Forgotson and Cook (1969) claimed that licensure was viewed as a legitimate exercise of the police power to protect the public health and safety. Vertiz (1985) stated this police power comes from the United States Constitution, specifically the Fourteenth Amendment. It is the "reserved or inherent power of the states to provide for the public health, safety, and general welfare" (Vertiz, 1985, p.88). Licensure laws gained a firm foothold in the U.S. between 1890 and 1910.

Blecharczyk and Fortune (1985) identified six steps involved in the establishment of an occupational licensing program. First is the identification of a potential threat to the public health, safety, or welfare from the incompetent, dishonest, or irresponsible practice of an occupation. Second, a statute or mandate to regulate the occupation is drafted into legislation. Third, the mandate is passed into law by the legislature. This is followed by

creating and staffing a regulatory agency or professional board. The fifth step involves the agency or board establishing rules, regulations, and policies concerning the licensing process. Finally, the minimum entry standards considered necessary for competent practice are established.

Rubin (1980) identified six elements as being common to professional licensing laws. First is a profession-dominated licensing board, through which the state legislature confers regulatory autonomy. Second, the licensing act defines the minimum education, experience, and fitness qualifications for the issuance of a license. Grandfathering is a provision that is made for the automatic licensing of any person who has already been engaged in the occupation. A code of conduct is established to provide limits of acceptable practice. Disciplinary measures are defined for the profession. The final element of state licensure is the prohibition of professional practice by unlicensed individuals.

Several authors, including Blecharczyk and Fortune (1985), Eliot (1972), Forgotson and Cook (1969), and Shimberg et al. (1972), have identified the protection and safeguarding of the public health and welfare as the primary justification for licensure. This protection is achieved through regulation of entry into the profession, establishment of safe practice standards, and disciplining those who do not adhere to the standards. This needs to be

a governmental function because the general public is not equipped to judge the competence of the practitioner.

While public safety has ostensibly been the rationale for professional licensing, it has not been the government nor the public which have initiated the regulation of various professions. Licensing has nearly always been the result of the profession's practitioners, and the motives may not be altogether altruistic. Abbott and Wallace (1990) proposed that occupational groups attempt to protect their status and prestige by professionalizing the occupation through a credential. Similarly Fortune (1985) and Shimberg et al. (1972) stated that professional associations often promote licensure as a way to enhance their prestige and public image. The association may be attempting to gain as much status and compensation as possible for its members. Eliot (1972) said that licensure may lay the foundation for creating monopolies that inhibit market competition. This occurs by limiting the supply of practitioners.

One of the shortfalls of licensure, identified by Shimberg et al. (1972), is the typical failure to verify a practitioner's competence as a condition of license renewal. On the other hand, Forgotson and Cook (1969) felt that professional licensing is, and probably should remain, merely a mechanism for the enforcement of minimum standards. Nongovernmental regulation is more important in assuring high quality health care because it typically requires

higher standards. Baron (1980) advocated professional certification rather than state licensing. He felt that practitioners should have the option to become certified. The public would then be able to choose between certified and noncertified workers. The results would include decreasing costs and the anticompetitive effects of licensing.

Certification programs frequently have their basis in law, but most such programs are voluntary. Shimberg (1985) defined certification as typically requiring standards of education, training, experience, as well as the passing of an examination. He continued that the major difference is licensing prohibits the practice of unlicensed individuals, certification does not. Confusion exists because of the proliferation in the number of credentials and credentialing agencies, as well as the historical use of labels. For example, nurses are licensed, but are still called "registered nurses" because at one time the names of qualified nurses were placed on an official register. Likewise certified public accountants and registered engineers are both licensed.

Blecharczyk and Fortune (1985) identified several benefits to licensing. It serves the professional directly by providing a legal public record that the licensee is qualified, as well as authorized, to practice. It indicates at least a minimal prediction of productivity and potential.

The license also provides guidelines and standards for practice. The indirect benefits include entry standards which limit the number of applicants, prestige and trust rendered to a licensed professional, and the elimination from practice of incompetent or unethical practitioners.

Similarly, Shimberg (1985) professed that the public undoubtedly benefits when a licensing board conscientiously screens applicants and denies licenses to unqualified individuals. There will also be a benefit when boards set high practice standards and insist that practitioners adhere to them. Standards that define appropriate professional conduct, as well as the relationship between professionals and clients can facilitate protecting the public from unethical or dishonest practitioners.

For the regulating agency, licensing provides a legal vehicle through which standards can be influenced. Authority is given to monitor entry and practice of the profession. An avenue to influence education and training is afforded. Licensing also provides a process to raise revenue to defray the costs of regulation.

Historical Aspects of Licensure and Selected Health Professions

Medicine

According to Derbyshire (1969), Frederick II, the German emperor who was elected King of Sicily, wrote the first medical practice law. The law required educational

standards and an apprenticeship. It also set fees, regulated ethical conduct, and included prison punishment for violators. Shryock (1967) claimed that the first educational faculty to license physicians was that of Salerno, early in the thirteenth century. These Italian ideas and practices reached northern Europe toward the end of the Middle Ages.

In England, the early medical guilds initially exercised controls over their own membership. This self-regulation eventually came to be sanctioned by the Church and the State. Parliament placed the control in the hands of the Church when the first national medical program was set up in 1510. Specifically, Bishops were authorized to examine and license physicians and surgeons. However those who were graduates of Oxford or Cambridge could practice without episcopal approval, since learned professions had long been licensed by university faculties.

England's professional regulation did not extend to its colonies. Consequently, in America's early history, most of the doctors' medical training was by apprenticeship, and self-taught trial and error. By the mid 1700s, a few of the colonists returned to Europe for medical training.

The French Revolution of the 1790s swept away that countries' old medical facilities and institutions. The national government took over many hospitals and set up

state medical schools. Medical licensing and examination also became functions of the national agencies.

In the mid 1800s, each of the government principalities in Germany maintained their own universities, and under new laws required the same state examinations and licenses for all physicians. Britain and the United States were slower to adopt these practices, apparently due to the Anglo-Saxon preference for self-regulation.

Derbyshire (1969) stated that the earliest law to control the medical profession in America was drawn up in Virginia in 1639. This law regulated the fees that physicians could charge. Shryock (1967) indicates the first requirement for a medical license was adopted in New York (for New York City) in 1760. A provincial medical society was formed in New Jersey in 1766. The society was primarily concerned with raising standards and income of practitioners. The provincial government was soon petitioned to set up a licensing system. In 1772, the Legislature and Governor adopted an act to "regulate medical practice throughout New Jersey" (Shryock, 1967, p.18). All practitioners had to be examined and approved. Fines could be imposed on those who practiced without a license. There was a grandfather clause for those already practicing as guild members.

According to Derbyshire (1969), medical societies had been founded in many of the states by 1830. All of these

advocated examination and licensing of physicians. Most state legislatures responded by passing licensure laws. The laws varied considerably, from the establishment of state boards to the granting of licensing power to state medical societies. Authority and control over the regulatory process also varied significantly.

During the period of 1820-1870 licensing requirements steadily deteriorated. This was due largely to the acceptance of medical degrees as superior licenses. In Texas, the state board of medical examiners was established in 1873. The state passed the first modern medical practice act that same year. In 1889, the West Virginia medical practice act of 1881 was upheld in the United States Supreme Court as a valid exercise of the police powers of the state.

Physical Therapy

Physical therapy is an allied health profession that shares many commonalities with athletic training. This occupation is approximately 30 years older in terms of its professional growth.

As noted by the American Physical Therapy Association (1979), this profession had its beginnings in the United States during World War I, as a physical reconstruction program for the war injured. The American Women's Physical Therapy Association was started in 1920. The first officers were elected in 1921.

A need was felt by the early physiotherapists to have standardization in the practice in order to be recognized and accepted by physicians so that they would refer patients to them. This feeling was confirmed by a California survey of a group of doctors, who responded with a near 100% affirmative reply that they would refer more patients if physiotherapy was standardized. The therapists at the time stated that state legislation and licensure was an essential step in the standardization of the profession and giving it a degree of validation to other health professions and the public.

An editorial in a 1924 issue of the Physical Therapy Review made the statement: "When the need for recognized schools of physiotherapy has been met and these schools firmly established, a special physiotherapy license will no doubt be easily obtained" (APTA, 1979, p.17). While this statement was somewhat oversimplified and naive, it did represent many other practitioner's feelings that legislation would provide legitimacy to the profession.

Not all therapists concurred, however. The Association was still in its formative stages and had a relatively small membership. A member of the advisory committee suggested staying out of politics, fearing classification with some of the cults, quacks, and healing fads of the time. Many of these factions were also seeking recognition through legislative means. A lawyer consulting with the therapy

association at the time disagreed and stated that groups obtained favorable recognition by legislation enacting regulation of the particular profession.

Lucile Grunewald published in 1928 the first acknowledged study of "physiotherapy as a profession" (APTA, 1979, p.24). The variables she looked at to identify physiotherapy as a profession were demand for practitioners, length, content and standards of training, standardization of the occupational practices, and legislation determining the requirements of licensing the practice.

The Physical Therapy Association appointed a committee in 1928 to deal with legislation. The duties of the committee were, "to be on the alert for any laws governing physical therapy; to gather information and investigate any matters pertaining to state legislation; and to advise and cooperate with chapters regarding their individual state problems" (APTA, 1979, p.18).

The Physical Therapy Association grew in membership and strengthened its academic programs. Through this strength, the Association was able to obtain more state regulation of the profession. It was felt that legislation would protect the standards of the profession.

Pennsylvania was the first state to license physical therapists in 1913. Today physical therapists are licensed in all 50 states.

History of Athletic Training

Arnheim and Prentice (1993) identified the roots of athletic training as being founded in the early Greek civilizations. With the establishment of the Panhellenic Games, which included the early Olympics, there were coaches and trainers to assist athletics in achieving peak performances.

Originally there were the medical "gymnastai." These individuals had some knowledge of diet, rest and exercise. Included in their techniques were hot baths, massages, and liniments. There were also the "paidotribai", youth or young boy massagers, and the "aleiptes", anointers, who used various oils, powders and massage.

Herodicus of Megara was possibly the greatest of the early Greek trainers. He was a physician in addition to being an athletic trainer. Herodicus was the teacher of Hippocrates, who was to become the "father of modern medicine."

As with the Greeks, sports and athletics were an important part of the Roman Empire. Likewise, trainers were a part of Ancient Rome. Galen was the most famous of these Roman trainer/physicians. He wrote at length concerning diet, rest, and exercise.

After the decline and fall of the Roman Empire, there was little interest in athletic activities. With the Renaissance, there was some renewal in sport involvement.

With the establishment of intercollegiate and interscholastic athletic events in the late nineteenth century, modern athletic training came into existence. Most of those early trainers possessed little technical knowledge. Their techniques typically consisted of rub-downs, liniments, poultices, and home-remedies.

In his history of the National Athletic Trainers Association, O'Shea (1980) identified Dr. S.E. Bilik as the "father" of modern athletic training. He published the Trainers Bible in 1916. This is considered to be the first publication written specifically for the preparation of athletic trainers.

The Cramer Chemical Company, started by brothers Charles and Frank Cramer, also played a significant role in the establishment of athletic training. The Cramers first published the First Aider in 1932. This publication's purpose was to give athletic trainers an insight into the latest athletic training methods.

By the late 1930s athletic trainers realized there was a need for a national organization. An association would not only maintain standards and serve as a forum for the exchange of ideas, but would also proclaim the professional stature of athletic training. The first national association was organized in the spring of 1938. The NATA Bulletin began to be published monthly by the association.

In 1941, the Trainers Journal became the official publication of the association.

World War II significantly hampered the early organizational efforts. Many of the early leaders were involved directly in the service and military efforts. The publications were disbanded and memberships were not renewed. For all intents and purposes, the initial NATA ceased to exist in 1944.

The second attempt at establishing a national organization began in 1947. Regional athletic training associations were organized from 1947 to 1950. Today's district format is a direct result of those early regional associations.

The current National Athletic Trainers Association was formed in 1950. The initial meeting was held in Kansas City, Missouri. One hundred one athletic trainers were in attendance. Annual membership dues were $2.00.

The Mentor began publication in 1951. This is considered the first publication of the new NATA. In 1956, the NATA Board of Directors voted to publish a new journal. The title of this publication was The Journal of the National Athletic Trainers Association. The association's publication has subsequently been titled the NATA Journal, and Athletic Training, the Journal of the National Athletic Trainers Association. The Journal of Athletic Training is the title now used for the NATA's research publication. The

association also publishes a monthly newsletter titled NATA News.

At the organization's national meeting in 1951, the constitution and by-laws of the association were approved and adopted by the Board of Directors. At the 1953 national meeting a code of ethics was first discussed by the Board. A committee was appointed to investigate an association code of ethics. In 1954 the committee was charged with writing a code of ethics.

In 1957 the original NATA code of ethics was adopted. The code's purpose was to "clarify ethical and approved professional practices and to distinguish them from those that might prove harmful and detrimental" (O'Shea, 1980, p.34). A secondary purpose was to instill in athletic trainers a sense of value and purpose. The code was revised in 1971, 1972 and 1992. Because the Board of Certification is now an entity separate from the NATA, the Board of Directors felt it was appropriate to address both ethical and regulatory concerns of the profession (Wood, 1992). Consequently, the Board of Certification developed the Standards of Practice which addresses the regulation of certification. The NATA's Ethics Committee developed the new NATA Code of Ethics which addresses the ethical standards for all the association's members. The primary goal of the new code is the assurance of high quality health care.

At the 1955 convention, a committee was appointed to initiate action to gain recognition from the American Medical Association. This committee was called the Special Committee on Gaining Recognition. In 1956, the committee was charged with investigating the possibility of affiliation with the National Collegiate Athletic Association (NCAA). The NATA became an affiliate member of the NCAA in 1957. In 1958, the association gained further recognition by securing membership in the United States Olympic Association.

In 1959 the committee on recognition was renamed, becoming the committee for professional advancement. The NATA was given recognition by the American College Health Association (ACHA) in that same year.

In 1961 the NATA made significant progress and gained wider recognition. The American Medical Association committee on the medical aspects of sports gave tribute to the NATA for its ethical professionalism. The American Association of Health, Physical Education and Recreation (AAHPER) also accepted the NATA as an affiliated association.

In 1962 the NATA was represented at a number of national meetings and sectional conferences of the AMA, AAHPER, ACHA and NCAA. By 1964 an NATA representative was attending the American Physical Therapy Association's national meeting. In 1967 the AMA recognized the role of

the professionally prepared athletic trainer as a part of the team responsible for the health care of athletes. The AMA also commended the NATA for its efforts to upgrade the profession through improved training and continuing education. State and local medical societies, as well as individual physicians were encouraged to help further the professional goals of the NATA through liaison activities. By 1972 the NATA had representation to or affiliation with all of the following:

American Medical Association Committee on Medical Aspects of Sports Conference and Contact Meeting

American College Health Association

American College of Sports Medicine

American Association for Health, Physical Education and Recreation

American Physical Therapy Association

National Federation of State High School Athletic Associations

Joint Commission on Competitive Safeguards and Medical Aspects of Sports

National Athletic Directors Association

American Corrective Therapy Association

National Collegiate Athletic Association

United States Olympic Committee

United States Basketball Federation

United States Track and Field Federation

National Operating Committee for Standards in Athletic Equipment

American Society for Testing Materials

Rules Committee of the National Collegiate Athletic Association

United States Olympic Committee, Medical and Training Services Committee

American Academy of Pediatrics, Sports Medicine Committee

In 1974 the Professional Education Committee (PEC) defined athletic training as "the art and science of prevention and management of injuries at all levels of athletic activity", while an athletic trainer was defined as "one who is a practitioner of athletic training" (O'Shea, 1980, p.80). In 1975 a new NATA patch was introduced, and the initials A.T.,C. (Athletic Trainer, Certified) would be used to designate professionals in the field.

In 1982 the NATA Board of Certification conducted a role delineation study (Grace & Ledderman, 1982). This study established that the athletic trainer spent his/her professional work time in the six major areas or domains of (a) prevention, (b) recognition and evaluation, (c) management/treatment, (d) rehabilitation, (e) organization and administration, and (f) education and counseling.

The Board of Certification, working with Columbia Assessment Services, Inc.(CAS), conducted another role delineation study in 1989 (CAS, 1990). The primary purpose of this study was to establish and validate content areas for the certification exam of athletic trainers. This role delineation study verified that the role of the athletic trainer included the previously identified six domains.

In 1990, four new departments were developed at the NATA national office. These were Communications, Governmental Relations, Meeting Management, and Members (National Athletic Trainers Association, 1992). In that same year, the NATA hired its first full-time executive director to coordinate the diverse functions and ever increasing variety of member services.

In June 1990, the AMA formally recognized athletic training as an allied health profession. The NATA, the American Academy of Pediatrics, and the American Academy of Family Physicians, in conjunction with the AMA's Committee on Allied Health Education and Accreditation (CAHEA), then established the Joint Review Committee for Educational Programs in Athletic Training (JRC-AT). The JRC-AT was to initiate the accreditation process of the entry-level athletic training programs (Rosenthal, 1991).

Behnke (1991) identified several benefits associated with CAHEA accreditation. One of these, is that accreditation assists the process of professional registration or licensure by providing a level of assurance of quality educational preparation for such credentialing.

The athletic training profession has undergone explosive growth in the past few years. There are more trainers in high schools and clinics than ever before. The NATA has become one of the fastest growing allied health care associations in the United States. According to the

NATA News, (Speed, 1993) the total current membership as of May 31, 1993, was 17,944 individuals. The number of certified athletic trainers was 11,695.

Athletic Training Education

In 1958 the committee on gaining recognition reported on its efforts to develop an educational curriculum for athletic training. The committee had worked on the development of a curriculum proposal for three years which would provide a practical foundation for individuals interested in pursuing athletic training as a profession. The professional advancement committee's proposal for an education curriculum was approved by the Board of Directors in 1959. However, it was 1969 before any real advancement was made. In that year two schools, the University of New Mexico and Mankato State University, met all the requirements to receive NATA approval of their curriculum programs.

In 1974, the NATA's Professional Education Committee published guidelines outlining educational criteria for athletic trainers. The guidelines covered a 4-year baccalaureate program and a 1-year master's program. Updated guidelines were published by the PEC in 1977, 1980, 1983, and 1988. The 1977 and 1980 versions included behavioral objectives to be addressed for the athletic training student.

Competency-based education in athletic training was first presented in the 1983 guidelines (PEC, 1983). These competencies replaced the behavioral objectives of the earlier guidelines. The competencies were presented in seven categories termed "major tasks". These included (a) prevention of athletic injuries/illnesses, (b) evaluation and recognition of athletic injuries/illnesses, (c) first aid and emergency care, (d) rehabilitation and reconditioning, (e) organization and administration, (f) counseling and guidance, and (g) education. In 1991, the Essentials and Guidelines for an Accredited Educational Program for the Athletic Trainer were initially adopted (Behnke, 1991). These standards were first used in 1993-94, to accredit athletic training education programs.

Certification of Athletic Training

As with approved education programs, certification has been an evolutionary process. According to O'Shea (1980) the Certification Recognition Committee's work in 1959 on developing curriculums not only led to educational programs, but also laid the foundation for setting up certification requirements.

In 1965, all active members of the NATA were given certificates and assigned a certification number. In 1968, a sub-committee was appointed to study certification by examination. In June of 1969, the Board of Directors

approved a procedure for certification. It was determined that all athletic trainers desiring to be certified after December 31, 1969, would have to pass an examination. All active members of the association at that time would be "grandfathered" and receive automatic certification.

The Professional Examination Service was contracted to assist in the development and scoring of the certification exam. The feeling at that time was that certification was essential in order to promote the NATA and the athletic training profession. In 1970, a board of certification was established, and the first certification examination was given in July that year in Waco, Texas. There was a written exam, as well as an oral and practical section on athletic training.

The certification exam currently consists of three sections. These sections include written, written simulation, and oral/practical examinations. The procedures used to develop the certification exam are carefully reviewed and documented (CAS, 1990). The exam is considered both valid and reliable in assessing candidates' competence.

State Regulation of Athletic Training

In 1973, Texas became the first state to regulate the profession by passing a law requiring licensure of athletic trainers. Twenty six states currently oversee the profession of athletic training through one of four kinds of

regulations. The types of state regulation of athletic trainers are licensure, certification, registration and exemption to other health profession acts. Licensure and certification are the most stringent forms of regulation. These typically have stricter requirements, and have greater control over the athletic training profession. Registration and exemption are usually much less rigid forms of regulation. These often do not require education or training requirements, although character references and bonding are sometimes necessary.

Licensure laws set the most rigorous standards as well as exercise the most stringent controls concerning athletic trainers. Licensure typically requires applicants to meet established standards, including formal educational requirements, the need to be of good moral character, and pass a state licensure examination. With a profession with the potential to harm the consumer, "licensure laws provide protection to both the public and the practitioner" (Jetton, 1992a, p.21). The twelve states that currently regulate through licensure laws are Delaware, Georgia, Massachusetts, Mississippi, Nebraska, New Mexico, North Dakota, Ohio, Oklahoma, Rhode Island, South Dakota, and Texas.

"Certification is appropriate for a profession that poses minimal risk to the public" (Jetton, 1992a, p.21). Kentucky, Louisiana, Pennsylvania, South Carolina, and Tennessee require state certification of athletic trainers.

The purpose of state certification is to assure that the certified individual has additional expertise within the scope of the athletic training profession.

Idaho, Illinois, Missouri, and New Jersey are the states that have registration requirements for athletic trainers. These states maintain a roster of the athletic trainers who are allowed to practice in the state. Some states set entry level standards as prerequisites of registration. Registration is "used for occupations where the threat of life, health, safety, and economic well-being is minimal and when other forms of legal redress are available to the public" (Jetton, 1992c, p.21).

Exemption is the least stringent form of regulation. This is a "legislative act that relieves one profession from being found in violation of another profession's practice act" (Jetton, 1992c, p.21). Educational criteria, recognition by an outside agency, or limiting crossover are means states use to grant exemption. Arizona, Colorado, Connecticut, Hawaii, and New Hampshire are the states that exempt athletic trainers from other health profession practice acts; these being physical therapy, physician assistants, medical practice, and masseur/masseuse acts.

O'Shea (1980) indicated that state licensing was a major topic of discussion at the NATA national meeting in 1976. At that convention the association formed a state licensing committee to further explore this issue. In 1989,

the Board of Directors charged the Licensure Committee Chair with one mission, to "assist state associations that are working to regulate the profession" (LeGear, 1989). In 1990, the Licensure Committee was changed to the Governmental Affairs Committee (Campbell, 1990). The goals of this committee were to "inform the membership of the means to access the expertise of the committee members and to develop packages to help members of state organizations obtain legislation" (NATA, 1992, p.3).

Also in 1990, the NATA developed four new departments at the national office. One of these was the Governmental Relations Department. This department was formed to support initiatives in state legislation and licensure. The department monitors regulations that affect athletic training, tracks issues at the state level, and provides information on the governmental affairs process.

Recently, the NATA Board of Directors established task forces to address the concerns of three NATA committees (Wood, 1992). The task force's recommendations were presented at the 1992 NATA national meeting. One goal of the Clinical /Industrial/ Corporate Athletic Trainer's Task Force was, with the assistance of the Governmental Affairs Committee, to "monitor and pursue favorable legislation that affects the ATC's role in clinical, industrial, and corporate settings" (Wood, 1992, p.4).

The NATA was recently involved in a strategic planning process. The vision for the NATA was to take a leading role in, among other areas, governmental regulations as they pertain to athletic training. Two of the nine long-term strategies were concerned specifically with state regulation. These were "#7) Provide education and assistance to members as to the merits and limitations of regulating practice acts and the national consequences that state laws create", and "#9) Ensure that regulating practice acts provide maximum advantage for athletic trainers in the health care environment" (NATA, 1992, p.5). These two planning strategies laid a foundation for the pursuit of state regulation by the athletic training profession.

Summary

In this review of related literature, professions and licensure have been discussed. Several components were identified as criteria for an occupation to be considered a profession. Common elements seen in the make-up of a profession were specialized knowledge based upon theory and some degree of autonomy. Licensure is one mechanism for recognizing autonomous practice. The concept of the government protecting the public from harm is repeatedly used as a justification for occupational licensure. Health professions are among those most commonly regulated by state legislation to safeguard the public welfare.

Medicine is considered as being one of the earliest professions, and licensure has certainly influenced the perception of that profession. Likewise, physical therapy has used state licensure to gain status and recognition for its practitioners.

Athletic training has progressed from its early beginnings to now being formally recognized by the AMA as an allied health profession. Athletic training has sound educational programs to train practitioners. There is a certification process to ensure competence of entry-level trainers. Licensure for athletic trainers may be perceived as a crucial step in the development of athletic training as a profession. At the time of this research study, approximately 50% of the states had some form of legislation to regulate athletic trainers.

CHAPTER III
METHODOLOGY

This study was designed to analyze the effectiveness of athletic training regulation in protecting the public from harm. The problem was described in Chapter I and the literature relevant to the study was reviewed in Chapter II. The methodology used to conduct the research will be explained in this chapter. Consideration will be given to design, subjects, data collection, and data analysis.

Design

This research was a three-part comparative descriptive study. The study first consisted of a comprehensive, systematic analysis of the legislation of the states that regulated the athletic training profession at the time of the research. The second phase of the study was to analyze the effectiveness of athletic training regulation in protecting the public. The third phase of the study was the development of model legislation for an athletic training practice act.

An expert jury was used in the first phase of the research to provide validation and feedback regarding the study. The selection of the expert jury members was

determined by the investigator, with suggestions from the doctoral committee member who is a certified athletic trainer and the athletic trainer who is the chair of the NATA Government Affairs Committee. The expert jury included Dan Campbell, ATC, Ed Crowley, ATC, and Keith Webster, ATC. Mr. Campbell is an athletic trainer at the University of Wisconsin Hospital--Sports Medicine Center, and is the current chair of the NATA Government Affairs Committee. Mr. Crowley is the head athletic trainer at the University of Iowa, and is the past chair of the Government Affairs Committee. Mr. Webster is a staff athletic trainer at the Houghston Sports Medicine Foundation in Columbus, Georgia, and a current member of the Government Affairs Committee.

The second phase of the research study was to determine the effectiveness of existing athletic training regulation in protecting the public from harm. This was accomplished by examining injury data, personal liability insurance rates, regulatory board sanctions, and legal case decisions.

The third phase of the study was the development of model athletic training legislation. Using the information validated by the expert jury in the first phase, statutes for a model athletic training practice act were presented.

Phase 1

Subjects

The first phase of this study was a comprehensive analysis of the athletic training practice acts of the states that currently regulate the profession. The subjects for the first phase of the study were the practice acts of the 26 states that regulate the athletic training profession. Analysis included all 26 practice acts rather than a sampling.

Data Collection and Analysis

The investigator conducted a comprehensive analysis of the practice acts of the states that regulate athletic training. The practice acts were obtained from the respective state's regulatory board or the governmental affairs office at the NATA national office. The investigator reviewed the practice acts for commonalities, as well as differences.

Each of the practice acts was classified as excellent, good, or moderate based upon the number of criteria addressed by the legislation. The criteria were determined by the investigator, with suggestions provided by the expert jury. The specific criteria included (a) a definition of athletic training and/or athletic trainer, (b) at least four of the six athletic training domains identified [prevention, recognition/evaluation, management/treatment,

rehabilitation, organization/ administration, and education/counseling], (c) supervision by a physician, (d) establishment of a regulatory board, including providing the authority for disciplinary actions and sanctions, (e) educational qualifications, including specific academic course requirements, (f) clinical education requirements, (g) title protection, (h) continuing education requirements, (i) applicant must pass an examination to earn state credential, (j) identification of nontraditional sites as practice settings, (k) reciprocity with, or endorsement from, other states, and (l) residency requirements.

In order for a state's practice act to be classified in the excellent category , at least 9 of the 12 criteria had to be included. Additionally, the first seven listed criteria had to be included as part of the minimum nine criteria for a practice act to be classified in the excellent category. To be ranked in the good classification, a practice act included at least 7 of the 12 criteria. The first three criteria and three of the following four criteria had to be identified for inclusion in the good category. A state athletic training practice act that addressed less than seven of the identified criteria was classified as moderate. The expert jury validated this categorization of the athletic training practice acts, as well as the identification of the criteria to determine the classification.

Phase 2

Subjects

The second phase of the research study was to determine if state regulation of athletic training protects the public from harm. This was accomplished by examining injury data, liability insurance rates, state athletic training regulatory board justification and sanctions, and legal case decisions to identify incidents of public harm. The subjects for the second phase of the research study were the 50 states of the United States, of which 26 regulated athletic trainers.

Data Collection

A number of sources were examined to determine if state regulation of athletic training protects the public from harm. One such source was injury data from various research centers and clearinghouses. These included the National Federation of State High School Athletic Associations and the National Spinal Cord Injury Center. These sources were contacted by phone and in writing to obtain the injury statistic data. Data were gathered detailing catastrophic injuries and fatalities only. These injury data were grouped according to whether the incident occurred in a state with athletic training regulation or not.

Another source used to determine safeguarding the public welfare was Maginnis and Associates. This company is

located in Chicago, Illinois, and is the primary firm that underwrites individual professional liability insurance for athletic trainers. The company was contacted by telephone to determine differences in liability insurance rates for athletic trainers practicing in states with state regulation compared with those that do not.

The next source to determine if state regulation protects the public from harm was the state athletic training boards for those states that regulate the profession by means of licensure, registration, or certification. The states of Arizona, Colorado, Connecticut, Hawaii, and New Hampshire regulate through exemption and have no athletic training boards. Each of the other 21 states athletic training regulatory boards were contacted by mail and with a follow-up telephone interview to determine if the concept of protecting the public from harm was used as a rationale or justification for the passing of the state's practice act. If this was the case, then follow-up questions determined how this was specifically identified. If a state has sunrise hearings for occupational licensing, this specific information would have been identified as part of that process.

The regulatory boards were also queried to see if any athletic trainers have been sanctioned by that board, as a measure of protecting the public from harm. For those

states that include occupational licensing in sunset reviews, this information was part of those hearings.

The final source to determine if state regulation of athletic trainers protects the public from harm was to analyze litigation involving athletic trainers. Westlaw and Lexis computerized legal searches were conducted to identify those cases in which an athletic trainer was identified in any context in the decision. If an athletic trainer was found negligent or liable, that was accepted as causing public harm. Those cases were then grouped according to those states that regulate the athletic training profession and those that do not.

Data Analysis

The data regarding incidents of injury were grouped according to whether the incident occurred in a state with athletic training regulation or not. This was done separately for the data from each of the research centers. Percentages were calculated to determine if a catastrophic injury is more likely to occur in a state that regulates athletic trainers or not based upon the injury research center data. A difference of 25% between the groups was reported as meaningful, as was used by Toy (1989) in a similar analysis.

Similarly, the data collected regarding professional liability insurance rates for athletic trainers was grouped

according to those states that regulate the profession and those that do not. Means were calculated to determine average insurance rates between the two categories. A difference of 25% between group means was reported as meaningful.

The data regarding sunrise and sunset hearings was reported as actual raw number incidents. Because a census of all states regulating athletic training was obtained, statistical testing was not appropriate.

The data regarding litigation including athletic trainers was grouped according to the states which regulate the profession and those that do not. Two separate analyses were conducted involving the legal cases. First, the cases in only the states that legislate athletic training were considered. Means were calculated for the number of cases that caused public harm prior to the practice act being passed, as well as for the number of cases after the legislation was enacted. The two group means were compared, with a difference of 25% between group means being reported as meaningful. A comparison was then made between the states which regulate athletic trainers and those that did not. A mean was calculated for the number of cases that were decided in states that do not regulate athletic trainers. A comparison was made to the mean of the cases decided in states after the legislation was passed. Again,

a difference of 25% between the group means was reported as meaningful.

After comparing the states that regulate athletic trainers with those that did not to determine if athletic training legislation protects the public from harm, a similar type of analysis was conducted to determine if there was a difference in public protection among the researcher's three classifications of states that regulate the profession. The groups of states with athletic training practice acts that have been classified as excellent, good, or moderate were analyzed to determine the differences that exist within the those groups in safeguarding the public welfare.

The same data as previously identified and collected was used for the analysis of this part of the study. The data groupings were identified as the states classified as having excellent, good, or moderate athletic training practice acts. The number of catastrophic injuries were tabulated before and after the practice act was passed within each of the state classifications. Means were calculated for the liability insurance rates for each of the groupings of state classifications. The data collected from the state athletic training boards regarding sunrise and sunset hearings was reported as the actual number of incidents. Finally the number of legal cases identifying athletic trainers in the context of the decision was

calculated for each of the classifications of states. Comparisons were then made between the groups of states identified as having good, moderate or poor athletic training practice acts to see if meaningful differences existed.

Phase 3

The third phase of this research study was the development of model athletic training legislation. The criteria presented in the first phase of this study were used as guides for the writing of the model legislation. The criteria were determined by the investigator with input from the expert jury. The expert jury also provided the validation of the criteria. The athletic training practice acts which were classified in the excellent category from the first phase of the study, were used as a basis for the writing of the model statutes. A mock legislative hearing bill prepared by the NATA Governmental Relations Department was also used. Additionally, the Uniform Statute and Rule Construction Act, drafted by the National Conference of Commissioners on Uniform State Laws (1993), was used as a guide for appropriate and consistent wording in the model statutes language.

Anticipated Outcomes

The research will indicate whether state regulation of the athletic trainer has afforded the public protection from harm. Additionally, based upon the analysis of the classification of states as having good, moderate, or poor athletic training practice acts, criteria for model legislation will be developed.

CHAPTER IV
RESULTS AND DISCUSSION

The purpose of this research was to analyze the effectiveness of athletic training regulation in protecting the public from harm. The study analyzed state government's existing public protection policies in regard to the athletic training profession. In order to do this, the study was conducted as a three part analysis.

Phase One

Qualitative Analysis

The first phase was a qualitative investigation of the practice acts of the 26 states that regulated the profession of athletic training at the time of the study. Each of the 26 practice acts was analyzed in order to categorize that particular legislative act. The practice acts were classified as excellent, good, or moderate based on the number of criteria addressed by the legislation.

Table 4.1 lists each of the identified criteria which was specified in the respective state's practice act. The analysis resulted in the practice acts of Illinois, Louisiana, Massachusetts, Mississippi, North Dakota, Ohio, and South Dakota being categorized as excellent. The

Table 4.1

Selected Criteria Appearing in State Athletic Training Legislation

State	A.T. Definition	Prevention Domain	Rec/Eval Domain	Man/Tx Domain	Rehab Domain	Org/Adm Domain	Ed/Coun Domain
AZ				X			
CO	X	X	X	X	X	X	X
CT	X	X	X	X	X		X
DE	X	X	X	X	X		X
GA	X	X	X	X	X		X
HI		X		X			
ID							
IL	X	X	X	X	X	X	X
KY	X	X		X	X		
LA	X	X		X	X		X
MA	X	X	X	X	X		X
MS	X	X	X	X	X	X	X
MO	X	X		X	X		
NE	X	X	X	X	X		
NH							
NJ	X	X		X	X		
NM	X	X		X	X		
ND	X	X	X	X	X	X	X
OH	X	X	X	X	X	X	X
OK	X	X		X	X		
PA	X						
RI							
SC	X	X		X	X		
SD	X	X	X	X	X		
TN	X	X		X	X		
TX							

N.S. - Not specified in practice act

Phys. Supervision	Regulatory Board	Academic Coursework	Clinical Experience	Title Protection	CEU's	Pass Exam	Non-traditional Setting	Reciprocity/Endorsement	Residency
X								X	
X		X	X						
X							N.S.	X	
X	X		X	X		X	X	X	
X	X		X	X	X	X	X	X	
X									
X	X		X			X	X	X	
X	X	X	X	X		X	X	X	
X	X	X	X	X	X	X	X	X	
X	X	X	X	X		X		X	
X	X	X	X	X	X	X		X	
X	X	X	X	X	X	X	X	X	X
X	X	X	X	X		X	N.S.	X	X
X	X		X	X		X			
X	X	X	X	X		X		X	
X	X		X			X	N.S.		
X	X	X	X	X		X		X	
X	X	X	X	X	X	X	X	X	X
X	X		X	X		X			
X	X	X	X			X		X	
	X	X	X	X		X			
X	X		X	X		X		X	
X	X	X	X	X	X	X	N.S.	X	
X	X	X	X	X	X	X		X	
X	X	X	X	X	X	X	N.S.		X

athletic training legislation for Delaware, Georgia, Kentucky, Missouri, Nebraska, New Jersey, South Carolina, and Tennessee were identified in the good classification. The practice acts rated as being in the moderate category included those from Arizona, Colorado, Connecticut, Hawaii, Indiana, New Hampshire, New Mexico, Oklahoma, Pennsylvania, Rhode Island, and Texas.

The qualitative analysis determined a number of common characteristics, as well as a variety of differences in the legislation of the 26 states. Most of the practice acts had a definition of athletic training and/or the athletic trainer. The exceptions were the states of Arizona, Hawaii, Idaho, New Hampshire, and Rhode Island.

Several states defined the specific powers and duties of athletic training. Most commonly, this was done with respect to the six domains of the athletic training profession. These domains are (a) injury prevention, (b) injury management and treatment, (c) injury rehabilitation, (d) injury recognition and evaluation, (e) education and counseling, and (f) program organization and administration. Only six states, Colorado, Delaware, Illinois, Mississippi, North Dakota, and Ohio identify all six of the athletic training domains.

Management/treatment is the most commonly identified domain, being listed in 21 states' regulations. Within the management/treatment domain, first aid or emergency care was

specifically identified in the legislation of 10 states. Modality usage was specified in a number of the state regulations. Connecticut, Georgia, Hawaii, Illinois, Kentucky, Louisiana, Massachusetts, Mississippi, Nebraska, New Mexico and South Dakota specified which modalities may be used by an athletic trainer. Of those, Hawaii and South dakota specified only heat and cold modalities, electrical modality use was not mentioned. Likewise, Nebraska did not restrict heat/cold usage, and electrical modality was permitted, but needed physician referral guidelines. Mississippi limited modality usage to orthopedic injuries on extremities only. Delaware approved modality usage in the clinical setting under the direction of a physical therapist, but did not specifically address usage in the nonclinical setting. Colorado, Pennsylvania and South Dakota required a specific course or formal training for modality usage by athletic trainers.

The domain of prevention was identified in 20 states' practice acts. Rehabilitation was listed in the regulation of 19 states. The evaluation/recognition domain was identified in 11 states' legislation. Nine states listed education/counseling in the athletic training regulations, while only six states specified the domain of administration/organization. The professional domains of athletic training were not identified whatsoever in the

state regulations of Idaho, New Hampshire, Pennsylvania, Rhode Island or Texas.

Another common precept found in state regulation of athletic training was supervision of the athletic trainer. Physician supervision was mandated in 24 of the 26 states. Arizona and New Hampshire were the two exceptions. In addition PT's could supervise athletic trainers in Delaware, Ohio, and Mississippi (clinical settings only). In Delaware and Ohio, chiropractors could act as the supervisor, and dentists could provide supervision in Illinois, Massachusetts, and Ohio. Delaware and Illinois also identified podiatrists, in addition to those previously identified, as a potential supervisor.

All of the states that regulated athletic training through licensure, certification or registration had an advisory board (the five states that regulated through exemption did not have advisory boards). Most of the state regulations were very specific as to the make-up and powers of the state athletic training boards. Common components listed for the board included qualifications, appointments, terms, vacancies, officers, meetings and reimbursement (mileage/per diem).

Athletic training boards were typically given powers regarding records, grounds for disciplinary action, violations, investigations, hearings, appeals, grounds for denial, and suspension or revocation of the state

credential. They were often given powers over examinations (content/sites/number per year), fees, grandfathering, qualifications, reciprocity or endorsement(either with NATA certification or other state regulations), and unauthorized practice.

The regulations concerning student/apprentice trainers and those dealing with visiting athletic trainers (ie. an athletic trainer employed by an athletic team that travels to that state for a competition) were also often overseen by the state athletic training board. Most of the state regulations had a paragraph or clause exempting visiting trainers, although these usually stated specific applicability for the non-clinical (or athletic) setting only. Other specific responsibilities delegated to the athletic training advisory board by some state regulations included continuing education requirements, exemptions for other allied health profession, and official seals.

Most of the state practice acts specified academic and/or clinical hour requirements necessary to qualify for the state athletic training credential. All of the states with the exception of Arizona, Connecticut, Hawaii and New Hampshire required the completion of a bachelor's degree from an accredited four year institution. Each of those same states also required clinical educational experience with specific supervised practical hour accumulations. Most typically this followed NATA and NATABOC standards of 800

practical hours required for graduates of NATA approved curriculums and 1500 hours for those completing the internship route to national certification.

While not as commonly identified, a number of practice acts also listed specific academic coursework that must be completed. Often this may only be a few courses specified in conjunction with the clinical hour requirements for the internship route candidate. Some states specified first aid or similar type courses for physical therapist candidates. The states of Illinois, Ohio, Rhode Island and Texas had a significant number of specified academic courses to have been completed in order to qualify for that states' respective credential.

One of the areas of discrepancy and controversy concerning state athletic training practice acts was the setting in which athletic training may be practiced. Fourteen states limit the practice of athletic training to traditional training rooms. These states are Arizona, Colorado, Hawaii, Louisiana, Massachusetts, Nebraska, New Hampshire, New Jersey, North Dakota, Oklahoma, Pennsylvania, Rhode Island, South Carolina and Tennessee.

The Nebraska act, for example, reads that a licensed athletic trainer may practice athletic training only for educational institutions, professional athletic organizations, or amateur athletic organizations. New Jersey's act states that an athletic trainer is a person who

practices athletic training as an employee of a school, college, university, or professional team. In South Carolina an athletic trainer was defined as a qualified person treating injuries incurred by athletes on a team by which the athletic trainer is employed. It was typically in the states that have regulated athletic training prior to 1980, that the practice act delineates the traditional training room as the only setting in which athletic trainers may function.

The state regulations for Delaware, Idaho, Kentucky, Mississippi, and Ohio allow athletic training in both clinical and traditional settings. While these states permit athletic trainers in clinical settings, professional autonomy may still be compromised. For example, the practice act of Delaware states that all treatments by athletic trainers in the clinical setting must be performed while under the direct, on-site supervision of a physical therapist.

Connecticut, Georgia, Missouri, New Mexico, South Dakota, and Texas did not specify site restriction within the athletic training practice acts. The scope of practice in Georgia was addressed by the state Attorney General in 1984. The opinion of the Attorney General at that time was the state practice act allowed clinical athletic trainers, but the individual could only treat athletes of the team that employed him. However in 1991, the Georgia athletic

training act was amended. While the amendment did not specifically mention clinical sites, it did give a very broad based definition to the term "athletic injury" which may be treated by an athletic trainer.

Reciprocity and/or endorsement were included in most states' athletic training acts. Colorado, Hawaii, Nebraska, New Hampshire, New Mexico, Oklahoma, Rhode Island and Texas did not have such provisions.

Massachusetts and Missouri were the only two states with athletic training practice acts that specified a residency requirement in order to qualify for the state credential. Ohio and Texas will accept substantial athletic training employment within the state in lieu of actual residency.

Although not identified in the specified criteria of the quantitative analysis, the concept of a renewal examination was investigated among the practice acts. South Dakota was the only state that required a renewal exam for the state athletic training credential. However, this was only required if the appropriate CEU's were not maintained. The practice act of Ohio allowed for a renewal exam in lieu of the CEU's, if so desired.

Other information of interest has also been gleaned from the qualitative analysis of the athletic training practice acts. The setting and type of fees relative to the state regulation of athletic training was a factor common to

all of the state athletic training practice acts. In some states, the fee structure was left to the discretion of the state athletic training advisory board as indicated earlier. In the states of Illinois, Kentucky. Louisiana. Mississippi, New Mexico, Ohio, Oklahoma, Rhode Island, South Dakota, and Texas the fees were determined by the state legislature within the state regulatory act itself.

Examination fees ranged from $15 (Rhode Island) to $75 (Louisiana). The licensure/certification/registration fees ranged from $25 (Kentucky, Oklahoma, Rhode Island) to "not to exceed" $50 (South Dakota). Other costs specified in various state regulations included fees for exam review, certificates (or duplicate certificates), late renewals, provisional/temporary state recognition, restoration/ inactive fees, fines, and bad check fees.

Another area of discrepancy among athletic training practice acts was the billing for services by the athletic trainer. In the majority of state regulations, this issue was not mentioned, however, there are significant differences among the statutes where it was addressed. In Delaware, Illinois, Massachusetts, and Mississippi athletic trainers were allowed to charge fees for services, but the laws were quite ambiguous. The Ohio athletic training practice act stated that the licensing regulations were not to be construed to prevent any association, corporation or partnership from advertising, describing or offering to

provide athletic training or billing for athletic training if the services are provided by a person licensed under the act and practicing within the scope of the license.

Conversely, the state regulations of New Jersey and North Dakota specifically prohibited billing for athletic training services. The practice act of New Jersey reads that "an athletic trainer may not practice or be employed by an individual or entity in order to do physical therapy procedures for reimbursement unless licensed with the physical therapy licensing act of 1983." This section can be interpreted to read that clinical athletic trainers in New Jersey may not function as physical therapy aides providing direct patient services if a fee will be charged for those services (Jetton, 1992a, p.21). Likewise the North Dakota statutes state that no person shall engage in the private practice of athletic training open to the public for a fee. The practice act of South Dakota was somewhat more ambiguous, however the intent seems clear to prevent athletic trainer's billing for services. The regulation indicated that the athletic training license may be revoked or suspended if a trainer receives direct or indirect compensation from individuals or third party payees for services rendered.

Unique clauses and items were found in the practice acts of the various states that regulate athletic training. For example, the South Dakota Board can require an applicant

to undergo a physical examination if a majority of the Board members suspect the physical or mental health of the applicant will jeopardize or endanger those who seek his assistance. The Board may deny the application for a license if the Board's medical exam does in fact, find the potential for endangerment. In Massachusetts, the athletic training licensure statutes indicate that an applicant for a school position with a valid state license shall be given hiring priority over a person without a license. While in Louisiana, state certification is specifically identified as not being required for individuals in non-public schools. In Kentucky, the state athletic training practice act certainly reflects the signs of the times by specifying as part of the continuing education requirements that certified athletic trainers must complete an approved course on HIV/AIDS.

As shown in Table 4.2, of the seven states identified in the excellent category, five were states that had state licensure of athletic training. The two exceptions were Illinois which had registration, and Louisiana which certified athletic trainers. However licensure is not necessarily synonymous with quality in terms of athletic training practice acts. While five of the 12 states that license athletic trainers were categorized in the excellent classification, three were in the good category, and four were classified as moderate. Likewise the states that

Table 4.2

Categorization by Type of State Athletic Training Regulation

State	Regulation	Classification
Arizona	Exemption	Moderate
Colorado	Exemption	Moderate
Connecticut	Exemption	Moderate
Delaware	Licensure	Good
Georgia	Licensure	Good
Hawaii	Exemption	Moderate
Idaho	Registration	Moderate
Illinois	Registration	Excellent
Kentucky	Certification	Moderate
Louisiana	Licensure	Excellent
Massachusetts	Licensure	Excellent
Mississippi	Licensure	Excellent
Missouri	Registration	Good
Nebraska	Licensure	Good
New Hampshire	Exemption	Moderate
New Jersey	Registration	Good
New Mexico	Licensure	Moderate
North Dakota	Licensure	Excellent
Ohio	Licensure	Excellent
Oklahoma	Licensure	Moderate
Pennsylvania	Certification	Moderate
Rhode Island	Licensure	Moderate
South Carolina	Certification	Good
South Dakota	Licensure	Excellent
Tennessee	Certification	Good
Texas	Licensure	Moderate

regulate athletic training through certification and registration were classified in each of the quantitative analysis categories with no observable trends identified. It is of significance to note that all five of the states that regulate athletic training through an exemption, were all classified in the moderate category.

It should be noted that this subjective rating of the state athletic training acts was simply a classification system for the quantitative analysis of this research study. It was in no way meant to reflect negatively on the athletic trainers who were involved with the passage of their respective states' legislation. Certainly, no athletic trainer would intentionally support and pass a weak regulatory law. In fact, there have been instances when a proposed bill has been pulled, rather than have a weakened, ineffective practice act passed by the state legislature.

Phase Two

After completing the qualitative analysis of the athletic training practice acts, the second phase of this research study was to determine if state regulation of the profession protects the public from harm. This was accomplished by testing the proposed research hypotheses regarding injury data, liability insurance rates, state athletic training regulatory board justifications and sanctions, and legal case decisions.

Catastrophic Injuries

Hypothesis 1, "there is no difference in catastrophic injury rates between states that regulate athletic training and those that do not", was rejected. Injury data were obtained from the National Federation of State High School Associations (NFSHSA) and the National Spinal Cord Injury Statistical Center. The NFSHSA data were obtained from Dr. Fred Mueller at the University of North Carolina--Chapel Hill, with permission from the executive director of the NFSHSA (see Appendix D).

The NFSHSA data covered the period from 1982 to 1992. Injuries resulting in disabilities (paralysis, coma, visual problems, and incomplete recovery) are indicated in Table 4.3. For the sport of football, 143 (66.5%) of the disabling injuries occurred in a state that did not regulate athletic trainers, compared to 72 (33.5%) for those that credentialed the profession. For sports other than football, 70 (82.4%) occurred in non-credentialed states and 15 (17.6%) in those that had legislation. Combined, this resulted in a total of 213 (71%) disabling injuries occurring in states with no regulation of athletic training, compared with 87 (29%) occurring in states with athletic training practice acts.

Table 4.4 identifies similar results for fatalities occurring in high school sports during the same 10 year time span. In football there were 76 (72.4%) deaths in non-

credentialed states compared to 29 (27.6%) deaths in states which regulated athletic trainers. All other sports had 74 (76.3%) fatalities in states without regulation, compared to 23 (23.7%) in states that did have legislation. Combined, this resulted in 150 (74.3%) of high school sports fatalities occurring in non-credentialed states as compared to 52 (25.7%) occurring in states that regulated athletic training.

Table 4.3

Disabilities Occurring in High School Athletics (1982-1992)

	States with A.T. Legislation	States without A.T. Legislation
Football	72	143
All Other Sports	15	70
Total	87	213

Disabilities include paralysis, coma, vision problems, or incomplete recovery.

The differences between percentages for each of the previously identified statistical measures comparing states with athletic training legislation to those without such regulations were all greater than 25%, and were accepted as being meaningful. The differences ranged from a low of 33% to a high of 64.8%.

Table 4.4

Fatalities Occurring in High School Athletics (1982-1992)

	States with A.T. Legislation	States without A.T. Legislation
Football	29	76
All Other Sports	23	74
Total	52	150

Table 4.5

Catastrophic Injuries Occurring in High School Sports Other than Football (1982-1992)

Sport	Disabilities	Fatalities
Track/CC	14	27
Basketball	4	34
Wrestling	25	12
Baseball	14	8
Swimming	7	3
Soccer	4	6
Ice Hockey	5	2
Gymnastics	6	1
Cheerleading	6	1
Lacrosse	0	2
Tennis	0	1
Total	85	97

Football did have the most fatalities and disabling injuries, giving credence to the perception of its nature as

a violent sport with significant potential danger. However, it is important to note, that 85 disabilities and 97 fatalities occurred in sports other than football, as indicated in Table 4.5. As might be suspected, wrestling resulted in the most disabilities. Somewhat surprising however, was the number of fatalities in the sports of basketball (34) and cross country/track (27). Even sports such as cheerleading and tennis had catastrophic injuries. This reinforces the need for the certification of athletic training at the high school level.

The investigator further analyzed the NFSHSA data in an attempt to make it more meaningful in terms of catastrophic injuries which occur in noncredentialed versus credentialed states. This was accomplished by identifying a "window" period for only those states which passed their athletic training practice act during the period of 1983 to 1991. This excluded only Georgia, Massachusetts, and Texas, which all had athletic training practice acts prior to 1983. The "window" period was defined as whichever was greater--the number of years from 1982 to the year the athletic training practice act was passed, or the number of years from the time the practice act was passed until 1992. The "window" was then expanded to reflect the exact same number of years either after or before the practice acts' respective year of passage. For example, Louisiana's practice act was enacted in 1985, so the pre-passage "window" included 1982-1984 and

the post-passage "window" was 1986-1989. Kentucky, on the other hand, passed the athletic training practice act in 1990, so the post-passage "window" was 1991-1992, and the pre-passage "window" was 1988-1989.

By analyzing these "windows", the investigator attempted to more accurately reflect the potential impact of athletic training regulation on catastrophic injury rates. This was accomplished by reducing the variable affects of time and injury exposure incidents which could not be controlled in the previous analysis of all of the NFSHSA data.

Table 4.6

High School Athletics Disabilities Occurring in "Window"

	Before Legislation Enacted	After Legislation Enacted
Football	23	10
All Other Sports	6	4
Total	29	10

Table 4.6 indicates the number of disabling injuries occurring in the "windows". For the sport of football, 23 (69.7%) of the disabling injuries occurred in the "window" of those states prior to the passage of the athletic training practice act, and 10 (30.3%) happened after the regulation was enacted. For sports other than football, 6

(60%) occurred in the pre-passage "window", while 4 (40%) occurred after. Combined, this resulted in a total of 29 (74.4%) of high school athletics disabling injuries occurring in the "window" before a state enacted its athletic training practice act, as compared to 10 (25.6%) occurring in the time period after the regulation was passed.

Table 4.7

High School Athletics Fatalities Occurring in "Window"

	Before Legislation Enacted	After Legislation Enacted
Football	9	1
All Other Sports	6	4
Total	15	5

Fatalities occurring in high school sports during these specified "window" periods are identified in Table 4.7. In football, there were 9 (90%) deaths in the pre-passage "window", as compared to only 1 (10%) in the time period after the legislation was passed in those states. All other sports had 6 (60%) fatalities prior to the credentialing of athletic trainers, while 4 (40%) happened in the post-passage "window". Combined, this identified 15 (75%) fatalities occurring in high school athletics in the pre-

passage "window", compared to 5 (25%) occurring in the "window" after passing the athletic training practice act.

For football, there was a difference of 39.4% for disabilities and 90% for fatalities occurring in the "windows". Both of these figures were considered to be meaningful. For all other sports, there was a difference of 20% for both disabilities and fatalities occurring in the "windows". Statistically, this was not considered to be meaningful. However, combining the injury data of football and all other sports, resulted in a difference of 48.8% for disabilities and 50% for fatalities occurring in the "windows". This was considered to be meaningful.

Injury data were also obtained from the National Spinal Cord Injury Center, which is located on the campus of the University of Alabama at Birmingham (UAB). Statistical information from various regional spinal cord injury centers are collected and compiled at UAB.

Most of the reported spinal cord injuries (SCI) result from non-athletic endeavors. These include motor vehicle accidents (44.8%), falls (21.7%), violent acts (16.0%) and others by unknown causes (4.5%) (SCI, 1990). Sports accidents do account for 13% of reported injuries to the SCI center. Further analysis of the data was conducted by the investigator to determine if any trends were reflected in the injuries occurring in states with athletic training regulation compared to those without such.

Table 4.8

Sports-Related Spinal Cord Injuries (SCI)

State	Total SCI	SCI Annual x	SCI/1 million population
Alabama	96	4.8	1.2
California	168	10.5	0.4
Georgia	84	7.6	1.2
Illinois	261	13.1	1.1
Michigan	54	2.9	0.3
New Jersey	11	3.7	0.5
Pennsylvania	117	7.8	0.7
Texas	182	9.1	0.5
Washington	70	4.7	1.0

Table 4.8 indicates the sports-related annual SCI per population of one million people for each of the listed states with a regional SCI Center. A composite average of .73 per million population was determined for the states without athletic training regulation. The states that regulate athletic training had a composite average of 0.80 per million population. There was a 5.2% difference between these two figures, which was considered not to be meaningful. The SCI data were not able to be identified by year of occurrence. Consequently there could be no analysis of a "window" period as was done with the NFSHSA injury data.

A major difference between the NFSHSA and the SCI injury data is the setting in which the injury occurred.

The sports-related SCI data could have happened in recreational, as well as organized athletics. The injuries documented by the NFSHSA data occurred in school sports practice or competition. While there are many high schools without the services of an athletic trainer, the potential is certainly much greater for an athletic trainer to have influenced a lesser number of catastrophic injuries in high school athletics as compared to the data collected by the National SCI Center.

Attempts also were made to obtain injury data from the National Collegiate Athletic Association, National Head and Neck Injury Registry, and the National Athletic Trainers Association. However, their data were not identified by the state the injury occurred in, rendering it ineffective for this research study.

The data comparing high school injuries occurring in states with athletic training regulation and those without such regulation supports the rejection of hypothesis one. State regulation of athletic training does seem to protect the public from harm in terms of catastrophic injuries occurring in high school athletics.

Liability Insurance

Hypothesis 2, "there is no difference between states that regulate athletic training and those that do not in level of harm to the public as measured by malpractice

insurance rates" was not rejected. The insurance firm of Maginnis and Associates is the primary company which underwrites individual professional liability insurance for athletic trainers. The company has been formally endorsed by the National Athletic Trainers Association, Inc. in this regard. Maginnis and Associates indemnify a certified athletic trainer for $1,000,000 per incident, with a maximum of $3,000,000 for all incidents in one year. The annual premium for the coverage is $176.00. The premium is the same for any ATC regardless of the state or practice setting the individual may be in. There is a higher premium for an athletic trainer who is self-employed, but it is still the same regardless of the state.

Legislation Justification

Hypothesis 3, " there is no indication of harm to the general public as measured by the number of incidents referred to by the individual states in the initial legislation application or sunrise hearings" was not rejected. Each of the states with an athletic training board was surveyed by means of a written survey instrument and/or a telephone follow-up interview to determine this information. The five states that regulated through exemption had no athletic training board and therefore could not be contacted. Of the remaining 21 states, 20 responses were collected for a sample return rate of 95%.

Of the state regulatory boards that were contacted, nine were unsure of what specific justifications were used in supporting the initial passage of the athletic training practice act. This may be partly attributed to individuals in state occupational regulation offices not being directly involved in the process of getting the legislation enacted. Also, changes in personnel over time may lead to those individuals currently on boards not being involved in the regulation initiation and consequently not knowing of the specific justifications.

For the states that could identify justifications for the initial athletic training legislation, 100% listed protection of the public in some sense or form. For example, the purpose of the Mississippi athletic training practice act is to safeguard the public's health, safety, and welfare by establishing minimum qualifications and titles for those desiring to offer athletic training services to the public. Likewise, the practice act of New Mexico was enacted in the interest of the public health, safety, and welfare, and to protect the public from the unprofessional, improper, incompetent, and unlawful practice of athletic training.

Although all of the states that could identify justifications included public protection in supporting the initial practice act application, only one state, Illinois, was able to provide specific documentation that supported

the public protection concept. This may be partly attributed to the data collected by two Governor's Task Force on Athletic Injuries workshops in Illinois in 1979 and 1980.

In addition to statistics regarding athletic injury treatment at high schools, five recent catastrophic injuries in the state were documented (Bell, 1985). One case was highlighted in which a high school football player suffered a cervical spine injury. The athletic trainer monitored the athlete's vital signs and directed the ambulance crew in maintaining the proper head and neck position. Even though the athlete suffered traumatic paralysis, he survived. In a separate incident at the same game, a spectator fell off a homecoming float, and also suffered a cervical spine injury. The ambulance crew apparently mishandled the injury and the individual died. Though both injuries were tragic, the importance of the athletic trainer was stressed.

There were only five specific incidents (all in one state) which could be identified supporting public protection as justification in the athletic training practice act's initial application or sunrise hearing. Therefore the research hypothesis three was not rejected.

Athletic Training Regulatory Board Sanctions

Hypothesis 4, "there is no indication of harm to the general public as measured by the number of sanctions levied

against athletic trainers by state regulatory boards" was rejected. There was a tremendous amount of disparity on this particular measure among the state athletic training boards. Of the 20 responding boards, 13 indicated that no sanctions had ever been levied against an athletic trainer in that state. Georgia, Idaho, and Mississippi each reported one sanction. Disciplinary actions were taken for violations of a sexual nature and for practicing without a license. Sanctions included prohibition of further working with minors and a warning letter respectively. Nebraska reported two sanctions, and Ohio had 12, all for practicing without a license. No specific disciplinary actions were reported. Illinois had approximately 20, for the use of the title without being registered. Reprimands included probation and/or fines. The total number of sanctions in Texas was unavailable, however there have been several. Most have been warning letters sent for allowing unlicensed individuals to practice, and not reporting such to the State Board. Written reprimands have been issued for allowing unlicensed individuals to practice and for unprofessional conduct with referees following a game. False information on an application resulted in an athletic training license being revoked.

Sunset hearings in New Mexico demonstrated the need for government regulation of athletic training to ensure public protection. Likewise, 1989 sunset hearings in South

Carolina concluded there was a need for regulation of athletic trainers. The sunset review board claimed that allowing individuals who do not meet minimum requirements to practice athletic training services could result in diminished protection for the public. Also, it could potentially increase liability for a school, should an injury be improperly treated.

The 1988 sunset review in Massachusetts determined that public high school athletes were not afforded the benefit of a licensed athletic trainer. It was claimed that school districts may be exposed to litigation amounting to millions of dollars if a severe injury were treated inappropriately by an unlicensed individual.

The most recent Georgia sunset review was held in 1988. It was stated that the State Board needed the authority to regulate more than just full-time athletic trainers. Since most high school trainers were not full-time, the legislation was protecting only a limited portion of the public. It was also suggested that the State Board seek statutory authority to require continuing education as a prerequisite for license renewal.

It seems many of the state athletic training boards have not been aggressive in policing the activities of the athletic trainers in their states. However, for those Boards which have, they have certainly focused on issues of public protection, safety and welfare. For this reason

research hypothesis four is rejected. State athletic training regulatory boards have protected the public from harm.

Legal Case Decisions

Hypothesis 5, "there is no difference between states that regulate athletic training and those that do not in the level of harm to the public as measured by the number of legal cases in which an athletic trainer was found negligent or liable was not rejected. Computerized searches of the Westlaw and Lexis legal databases were used to gather the data for this portion of the study.

One of the most surprising results of this aspect of the research, was the relative paucity of legal cases involving athletic trainers. The review of case law from 1960 to 1993 identified only eighteen cases in which an athletic trainer was referred to in the decision of the litigation. Furthermore, in eight of those eighteen cases, the athletic trainer was part of the incident, but not a party of the litigation, or was merely a witness in the litigation. So there were only ten cases which identified an athletic trainer as a defendant in the action. There were no cases in which a trainer was the sole defendant, nor was an athletic trainer the plaintiff in any case. Table 4.9 highlights the cases in which an athletic trainer was identified in the decision of the litigation.

Table 4.9

Litigation Involving Athletic Trainers

Case	Date	State	Institution	Sport	Finding Regarding Trainer
Zoller	1973	LA	college	football	N/A-case was insurance issue
Lowe	1976	TX	college	football	not liable-government immunity
Speed	1976	IA	college	basketball	N/A-part of incident not suit
Lowery	1977	TX	college	basketball	not liable-statute of limitations
Garza	1979	TX	high school	football	not liable-government immunity
O'Brien	1980	IL	high school	football	not liable-student trainer didn't have competency to treat, injury happened in non-school activity
Sielicki	1980	FL	professional	baseball	N/A-workman's compensation
Rawlings	1981	TX	college	football	N/A-witness
Gillespie	1983	UT	college	basketball	liable-held to same standard as physician
Berthelot	1984	LA	high school	football	N/A-witness
Hansen	1986	OH	college	lacrosse	not liable-injury caused by impact, not delay in treatment
Krueger	1987	CA	professional	football	N/A-team physician fiduciary relationship
Sorey	1988	MS	college	football	not liable-trainer was performing discretionary functions

Table 4.9--continued.

Case	Date	State	Institution	Sport	Finding Regarding Trainer
Healy	1990	IL	college	gymnastics	not liable-no claim trainer acted in violation of law or excess of authority
Senser	1991	MN	professional	football	N/A-workman's compensation
Jarreau	1992	LA	high school	football	liable-failure to refer injury for further evaluation
Lennon	1993	AL	college	soccer	not liable-acting in scope of duties
Cue	1993	WI	college	football	N/A-settled; trial concerned settlement money

The most likely reason for the few legal cases involving athletic trainers is the concept of "deep pockets". Undoubtedly, a prime motivation for litigation by a plaintiff is the recovery of monetary losses due to an injury. Traditionally, athletic training is not recognized as a lucrative profession. Consequently, the institution employing the athletic trainer and/or the supervising physician may well be a much more attractive potential defendant.

All levels of athletics were included in the litigation. There were four cases at the high school level, eleven at colleges and universities, and three involved professional sports. Eleven cases arose from football injuries and three from basketball. There was one case each from the sports of baseball, lacrosse, gymnastics, and soccer.

In each of the ten cases in which an athletic trainer was named as a defendant, the allegations involved negligence. Negligence is a question of state law, and contains four elements. There must be the existence of a duty or standard of care. The duty must be breached. An injury or damage must be sustained by the plaintiff, and the breach must have caused the injury (Baley and Matthews, 1988). In order for the defendant to be found negligent, all four elements must be shown.

In the review of the case law, there were only two cases in which an athletic trainer was found to be negligent. In Gillespie, a student trainer was found to have contributed to the frostbite, thrombophlebitis, and gangrene suffered by an athlete with improper care of a sprained ankle. The student trainer was held to the same standard of care as a physician rather than to less strict first aider's standards. In Jarreau, the athletic trainer was found negligent for failure to refer an athlete to appropriate medical care when he continued to complain of pain and swelling after he suffered a wrist injury which ultimately proved to be a fracture.

There were eight cases where the athletic trainer was not found negligent. Three cases (Lowe, Lowery, and Gaya) did not specifically address issues of negligence but were decided on the basis of government immunity because of the trainer being a public school employee or due to the statute of limitations. Four cases (Hansen, Sorey, Healy, and Lennon) determined that the athletic trainer was not negligent because they were acting in the scope of their duties, were performing discretionary functions, or that an injury was a result of impact, not from a breach of duty. In O'Brien, a student trainer was found to be not negligent because it was not within his standard of care to provide treatment for septicemia that occurred in a non-school related injury.

Of the two cases in which the athletic trainer was found liable for negligence, one occurred in a state with athletic training regulation (Louisiana) and one occurred in a state without regulation (Utah). Having only one case in each of the categories makes statistical analysis irrelevant for the data regarding this portion of the study. Of the ten cases in which an athletic trainer was named as a defendant, regardless of the outcomes, five occurred in states with athletic training regulation and five in states without. However, in none of the cases, did the issue of state regulation arise. The indication, at least at the time of this study, is that state regulation of athletic training does not result in an increase in litigation involving the profession's practitioners. Because the legal case decisions do not indicate that state regulation of athletic training protects the public from harm, hypothesis five is not rejected.

Practice Act Classification Analysis

After comparing states that regulate athletic trainers with those that do not, an analysis was conducted to determine if there was a difference in public protection among the researcher's classification of states that regulate the profession. The states with athletic training practice acts categorized as excellent, good, or moderate

were investigated to determine if differences existed within the classifications in safeguarding the public welfare.

Table 4.10

High School Athletics Catastrophic Injuries (1982-1992) by Classification of State Athletic Training Legislation

	Excellent Before/After	Good Before/After	Moderate Before/After
Football Disabilities	23/26	10/23	17/23
Other Sports Disabilities	11/3	6/7	2/5
Football Fatalities	8/2	5/8	10/18
Other Sports Fatalities	9/7	3/9	5/8
Total	51/38	24/47	34/54

Table 4.10 identifies the number of catastrophic injuries, extracted from the NFSHSA data, according to the classification of the state's athletic training legislation. Total catastrophic injuries decreased by 25.5% after the passage of the practice act in those states classified as having excellent regulation. This was the only state classification to have a decrease in catastrophic injuries after the athletic training regulation was enacted.

Total catastrophic injuries were further analyzed to determine the number which occurred in the "window" time period described earlier in this chapter. These data are

presented in Table 4.11. All three classifications of state athletic training legislation had a decrease of total catastrophic injuries occurring in the post-passage "window".

Table 4.11

High School Athletics Catastrophic Injuries Occurring in "Window" by Classification of State Athletic Training Legislation

	Excellent	Good	Moderate
	Before/After	Before/After	Before/After
Football Disabilities	10/7	5/2	8/1
Other Sports Disabilities	2/0	3/2	1/2
Football Fatalities	2/0	1/1	6/1
Other Sports Fatalities	3/1	0/1	3/2
Total	17/8	9/6	18/6

Of the states included in the regional spinal cord injury registry, only one was in the excellent category. There were two each in the good and moderate classifications. Consequently, the spinal cord injury data were too limited to make inferences regarding the state athletic training practice act classification.

As discussed previously, athletic training professional liability insurance rates were not based upon the location of the practitioner. Consequently, there was no difference

for liability insurance premiums among the three classifications of states with athletic training legislation.

Data concerning the justifications for athletic training regulation application and/or sunrise hearings showed no trends regarding the practice act classification. Protection of the public health, safety, and welfare was identified in three states classified as excellent, in three as good, and in five moderate states. Again Illinois, which was in the excellent category, was the only state able to provide specific incident documentation that supported the public protection concept.

On the other hand, sanctions by state athletic training boards showed a significant difference among the classifications of state practice acts. Of the states categorized as moderate, only two had levied sanctions against athletic trainers. Idaho had one sanction. Texas was unable to determine a specific number of sanctions, but indicated it was "several". Likewise two states in the good category had imposed sanctions. Georgia had one and Nebraska two. Three states in the excellent classification had levied sanctions against athletic trainers. Mississippi had one sanction, however, 12 had been imposed by Ohio, and Illinois had 20.

As was discussed earlier concerning legal case decisions, there have been very few cases identifying an

athletic trainer in the context of the decision. Because of the low numbers, no trends could be distinguished among the state classifications.

Though the data was somewhat limited, the states classified as excellent did appear to be more effective in protecting the public health, safety, and welfare. No distinctions could be determined between the good and moderate classifications.

CHAPTER V
MODEL ATHLETIC TRAINING LEGISLATION

In the previous chapter, the results of the first two phases of the study were discussed. Specifically, this was an analysis of state government's existing public protection policies with regard to the athletic training profession. This was one of the stated purposes of this research study. A further purpose of the study was the identification of criteria in athletic training practice acts important to the protection of the public, and the subsequent development of model athletic training legislation. This was the third phase of this research study.

The investigator wrote the proposed model legislation using several sources as guides. Primarily, these included the practice acts of the states that this research study has previously classified in the excellent category. These states were Illinois, Louisiana, Massachusetts, Mississippi, North Dakota, Ohio, and South Dakota. Also used were a mock legislative hearing bill prepared by the NATA Governmental Relations Department and the Uniform Statute and Rule Construction Act drafted by the National Conference of Commissioners on Uniform State Laws (1993).

In order for a bill to become a law, significant lobbying of legislators is typically required. The reader is referred to Pronsati (1991) for a thorough discussion of lobbying efforts to facilitate legislation being enacted.

Model Statutes

(Year)

SYNOPSIS: An act to provide for the licensing and regulation of athletic trainers; to define certain terms; to create the Utopia Board of Athletic Training; to establish duties and powers of the Board; to specify the requirements to receive an Athletic Trainer license; and for related purposes.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF (state):

Section 1. Title of Act.

This act shall be known as and may be cited as the "(state) Athletic Trainers Licensure Act".

Section 2. Definitions.

The following terms shall have the meanings ascribed herein:

"Athletic Trainer" means an allied health professional with the specific qualifications set forth in Section 7 of this Act and who is duly licensed in accordance to this act. An athletic trainer practices the art and science of athletic training under the direction of a licensed physician

"Athletic Training" means the practice of prevention,

recognition, assessment, management, treatment including first aid and emergency care, disposition, and rehabilitation of athletic injuries and illnesses; the organization and administration of athletic training programs; and the education, counseling and guidance of athletes and the public regarding athletic training. Specific athletic training duties include but are not limited to:

(A) applying protective or injury-preventative devices such as taping, padding, bandaging, strapping, wrapping, or bracing;

(B) coordinating physical exam and health history updates;

(C) selecting, fitting, and maintaining protective equipment;

(D) assisting in developing and implementing physical conditioning programs;

(E) providing on-site injury assessment and care; as well as appropriate transportation and follow-up treatment for all athletic injuries and illnesses;

(F) providing emergency care to a physically active individual until the services of a physician or emergency medical services can be obtained. To accomplish this care, an athletic trainer may use such methods as accepted first aid procedures established by the American Red Cross and the American Heart

Association, and protocol previously established by the athletic trainer and the supervising physician;

(G) providing rehabilitation to physically active individuals following injury. This may consist of preestablished methods of physical modality use and exercises as prescribed by the supervising physician;

(H) determining, with a physician, when a physically active individual may safely return to participation post-injury;

(I) supervising athletic training facilities and inspecting playing facilities;

(J) selecting and maintaining athletic training equipment and supplies;

(K) maintaining complete and accurate records of all athletic injuries/illnesses and treatments rendered;

(L) instructing and supervising student athletic trainers; and

(M) advising and counseling with regards to nutrition and hygiene.

"Athletic injury/illness" means an injury/illness sustained by a person as a result of such person's participation in activities, exercises, games, sports, or recreation requiring physical strength, agility, flexibility, range of motion, speed, or stamina or any comparable injury.

"Board" means the (state) Board of Athletic Trainers.

"Clinical Setting" means an athletic training employment

setting other than those affiliated with organized athletics. These include clinics, hospitals, out-patient facilities, community recreation facilities, and corporate/ industrial facilities.

"Department" means the Department of Professional Regulation.

"Director" means the Director of Professional Regulation.

"License" means the authorization issued by the (state) Board of Athletic Trainers.

"Licensee" means an individual possessing a valid athletic trainers license issued by the (state) Board of Athletic Trainers.

"Physician" means a physician (M.D. or D.O) licensed by the (state) State Board of Medical Licensure.

"Student Athletic Trainer" means a person actively fulfilling the requirements, as established by the State of (state), to obtain a (state) athletic training license, and working under the direct supervision of a licensed athletic trainer.

Section 3. (State) Board of Athletic Trainers--Appointment--Membership--Term--Duties.

The Director of the Department of Professional Regulation shall establish the (state) Board of Athletic Trainers. The Director shall also appoint the members of the Board. In making the appointments, the Director shall give consideration to recommendations made by professional

societies of certified athletic trainers and professional organizations of physicians. The membership of the Board should reasonably reflect representation from the geographic areas in the state.

The Board shall be composed of seven members. Five members shall be licensed athletic trainers, and actively engaged in athletic training. One member shall be a physician licensed to practice medicine, and one member shall be from the public at large and have no connection with the practice or profession of athletic training. To quality as a Board member, the individual must have been a resident of (state) for two years immediately preceding the appointment.

Board members shall be appointed for terms of four years which shall expire on July 1 of the last year of their term except that in making initial appointments, the Director shall designate two members to serve four years, two members to serve three years, two member to serve two years, and one member to serve one year. No member shall be reappointed to the Board for more than two terms. In the event of death, resignation, or removal of any member, the vacancy shall be filled for the unexpired portion of the term in the same manner as the original appointment. The Director may remove any member for just cause prior to the expiration of the member's term. Initial terms shall begin upon the effective date of this Act.

The Board shall elect from its members, for a term of two years, a chairperson, a vice-chairperson, and a secretary-treasurer, and may appoint committees as it considers necessary to carry out its duties. The Board shall meet at least one time a year. Notice shall be given to Board members 45 days in advance of the meeting. Additional meetings may be held on the call of the chairperson or at the written request to the Board chairperson by any three members of the Board. A quorum is required for any meeting of the Board. Four Board members constitute a quorum. No action by the Board to its members has any effect unless a quorum of the Board is present.

Section 4. Powers and Duties of the (state) Board of Athletic Trainers.

The Board has the following powers and duties:

(A) to adopt, amend, promulgate and enforce rules, regulations, and standards to implement and execute the provisions of this Act;

(B) to keep permanent records of all proceedings under this Act;

(C) to present an annual report to the Director;

(D) to keep a complete record of all licensed athletic trainers, to prepare annually a roster showing the names, addresses, and places of employment of all licensed athletic trainers, and to make available a copy of such roster to any person upon request and for

a fee not to exceed the actual cost of printing and mailing;

(E) to prescribe necessary forms, establish appropriate fees and authorize expenditures in order to comply with the provisions of this Act;

(F) to adopt an official seal and license document of suitable design and to issue and renew such licenses to qualified applicants;

(G) to establish rules to determine the scope and nature of the continuing education courses that comply with the requirement for renewal of a license pursuant to Section 11 of this Act;

(H) to refuse to issue, renew, or suspend and revoke licenses pursuant to Section 12 of this Act;

(I) to conduct hearings in accordance with Section 13 of this Act;

(J) to reinstate a license pursuant to Section 15 of this Act;

(K) to adopt rules establishing the standards of ethical conduct for athletic trainers licensed under this Act; and

(L) to employ an executive secretary and other persons necessary to carry out the provisions of this Act. The executive secretary shall have such duties and responsibilities as determined by the Board.

Section 5. Liability of the Board.

No member of the Board shall be liable to civil actions for any act performed in good faith in the execution of duties in administering this Act.

Section 6. Board Members Per Diem.

Members of the Board shall receive a per diem determined by the Department for each day they are actually engaged in the work of the Board. Board members shall be reimbursed for all actual and necessary expenses incurred in the performance of the duties required by this Act.

Section 7. Qualifications.

To qualify for an athletic trainers license, a person shall:

(A) have satisfactorily completed an application for licensure in accordance with rules adopted by the Board;

(B) have paid the examination fee required under Section 9 of this Act;

(C) be a resident of (state) or perform substantial athletic training within the state;

(D) be of good moral character;

(E) give proof of graduation from a four-year accredited college or university and have met the following minimum athletic training course requirements established by the Board:

(1) anatomy;

(2) physiology;

(3) physiology of exercise;

(4) applied anatomy or kinesiology;

(5) psychology (2 courses);

(6) first aid and CPR;

(7) nutrition;

(8) modalities;

(9) remedial exercise or therapeutic exercise;

(10) personal, community, and school health, which may include drug and alcohol abuse courses;

(11) techniques of athletic training (fundamental);

(12) advanced techniques of athletic training (evaluation/assessment, administration);

(F) in addition to the coursework requirements listed above, have completed a minimum of 800 hours of clinical experience over a minimum of a two-year period under the direct supervision of a certified athletic trainer. At least 25% of the clinical hours must have been obtained in working with high risk sports (football, soccer, hockey, wrestling, basketball, gymnastics, lacrosse, volleyball, and/or rugby);

(G) have passed an examination adopted by the Board.

Section 8. Examinations.

The Board shall establish examination and testing procedures to enable the Board to ascertain the competency of persons wishing to be licensed as athletic trainers. The Department shall authorize examinations at least twice each year at

such time and place as it may designate. The Department may engage the National Athletic Trainers Association Board of Certification as consultants for the purposes of preparing and conducting examinations.

Applicants for examination as athletic trainers shall be required to pay, either to the Department or the designated testing service, a fee covering the cost of providing the examination. Failure to appear for the examination on the scheduled date, at the time and place specified, after the applicant's application for examination has been received and acknowledged by the Department or the designated testing service, shall result in forfeiture of the examination fee. If an applicant neglects, fails, or refuses to take an examination or fails to pass an examination for licensure under this Act within two years after filing an application, the application shall be denied. However, such applicant may thereafter file a new application accompanied by the required fee.

Section 9. Issuance of Licenses by the Board.

An individual is entitled to a (state) athletic training license provided the following requirements are met:

(A) the individual is an athletic trainer, as defined in Section 2 of this Act;

(B) the individual has submitted the appropriate forms to the Board;

(C) the individual has paid the requisite fees as set by the Board;

(D) the individual is not in violation of any of the State of (state) laws, rules or regulations, has never been convicted of a felony or misdemeanor involving moral turpitude, the record of conviction being conclusive of evidence of conviction if the Board determines after investigation that such a person has not been sufficiently rehabilitated to warrant the public trust, nor secured a license under this Act by fraud or deceit.

Any person actively engaged as an athletic trainer on the effective date of this Act shall be issued a license if the person submits an application, pays the license fee required by this Act, and is approved by the Department. In its evaluation, the Department shall accept the applicants having certification by the National Athletic Trainers Association Board of Certification as being the required level of competence. For applicants not having such certification, the Department shall, with the advice of the Board, establish rules for evaluation and examination which shall take into account the applicant's education, training and experience qualifications. For the purposes of this Act, a person is actively engaged as an athletic trainer if the person has been employed on a salary basis for athletic training services and performs the duties

of an athletic trainer under the supervision of a licensed physician, as a major responsibility of the person's employment for three of the preceding five years prior to application for license.

Applications for a license by a person actively engaged as an athletic trainer must be made within 180 days from the effective date of this Act.

Section 10. Reciprocity.

The Department may, at its discretion, license as an athletic trainer, without examination, on payment of the fee, an applicant holding an athletic trainer's license or certificate issued by another state provided that the requirements to obtain a license or certification in that state are comparable to qualifications for licensure in (state).

Section 11. Renewal of License.

A license issued under this Act expires three years after the date of issue, but each person holding a valid, unexpired license may apply to the Board on approved forms for renewal of such license. The license shall be renewed upon payment of the prescribed license renewal fee and submission to the Board of proof of satisfactorily completion of not less than eight units of continuing education courses acceptable to the Board, or reexamination. No license may be renewed more than two times without successfully completing a reexamination.

Section 12. Grounds for Refusal to Issue or Renew a License; Grounds for Suspension or Revocation of a License. The Board may refuse to issue an athletic trainer's license, or may suspend or revoke an athletic trainer's license, or reprimand or place a licensee on probation, if the Board determines that the applicant or licensee:

(A) has demonstrated negligent or intentional disregard for this Act, or the rules or regulations promulgated hereunder;

(B) obtained a license through fraud, false or misleading representation, or concealment of material facts or bribery;

(C) has been negligent or professionally incompetent in the practice of athletic training;

(D) has been convicted of any crime under the laws of the United States or any state or territory thereof which is a felony or which is a misdemeanor, and an essential element of which is dishonesty or moral turpitude, or of any crime which is directly related to the practice of the profession;

(E) has violated the standards of ethical conduct in the practice of athletic training, engaging in dishonorable, unprofessional or unethical conduct of a nature likely to deceive, defraud or harm the public;

(F) has used alcohol or other controlled substance to the extent that the ability to practice athletic training at a level of competency is legally impaired;

(G) has a physical or mental condition that is determined by a medical examiner to be such as to jeopardize those who seek relief from the licensee. A majority of the Board may demand an examination of the licensee by a competent medical examiner selected by the Board at the Board's expense. If the licensee fails to submit to the examination, this shall constitute immediate grounds for suspension of the licensee's license;

(H) has engaged in the practice of athletic training under a false or assumed name, or has impersonated another practitioner of a like or different name;

(I) has knowingly practiced athletic training with an infectious communicable or contagious disease (such as infectious hepatitis, measles, etc.);

(J) has willfully made or filed false records or reports in his practice, including but not limited to false records filed with state agencies or departments

(K) has willfully violated or knowingly assisted in the violation of any law of this State relating to the use of habit-forming drugs;

(L) has willfully failed to report an instance of suspected child abuse or neglect;

(M) has used any words, abbreviations, figures or letters with the intention of indicating practice as an athletic trainer without a valid license as an athletic trainer under this Act;

(N) has failed, within 60 days, to provide information in response to a written request made by the Department or Board;

(O) has violated the terms of probation after a licensee has had the license placed on probationary status;

(P) has aided or assisted another person in violating any provision of this Act.

Section 13. Hearing.

Any person whose application for a license or renewal of license that is to be denied by the Board shall be notified in writing at least 45 days prior to such action and be entitled to a hearing. The hearing shall be conducted prior to the Board's action. The hearing shall be conducted in accordance with the State of (state) Administrative Procedures Act.

Persons subject to probation, suspension or revocation of license shall be notified in writing at least 45 days prior to such action and shall be entitled to a hearing conducted prior to probation, suspension or revocation in accordance with the State of (state) Administrative Procedures Act.

Section 14. Temporary Suspension of a License.

The Director may temporarily suspend the license of an athletic trainer without a hearing, simultaneously with the institution of proceedings for a hearing provided for in Section 13 of this Act, if the Director finds that evidence in his possession indicates that an athletic trainer's continuation in practice would constitute an imminent danger to the public. In the event that the Director suspends, temporarily, the license of an athletic trainer without a hearing, a hearing by the Board must be held within 30 days after such suspension has occurred.

Section 15. Reinstatement of License.

If the Board places a licensee on probation under Section 12 of this Act, the Board's order shall be accompanied by a written statement of the conditions under which the person may be removed from a probationary status and restored to practice without any conditions.

Application for reinstatement of an athletic trainer's license that has been suspended or revoked may not be made to the Board prior to the expiration of a period of six months after the order to suspend or revoke has become final. Such application shall be made in the manner and form established by the Board. The Board may accept or deny the application for reinstatement and may require the applicant to pass an examination as a condition for reinstatement.

Section 16. Unlawful Practice.

After the effective date of this Act, no person shall represent himself as an athletic trainer in this State, or use the title "athletic trainer" or "licensed athletic trainer" or "certified athletic trainer" or "athletic trainer certified", or the letters "A.T.", "L.A.T.", "A.T.C.", or "C.A.T. or any facsimile thereof after his name, unless that individual possesses a valid athletic trainer's license issued pursuant to this Act.

Violation of any provision of this Act constitutes a misdemeanor offense and shall be punishable according to the laws of (state).

Section 17. Exemptions to the Act.

Nothing in this Act shall be construed as preventing or restricting the practice, services, or activities of any person who:

(A) is licensed or registered in this State by any other law from engaging in the profession or occupation for which that person is licensed or registered;

(B) is employed as an athletic trainer by an agency of the United States Government and provides athletic training solely under the direction or control of the organization by which he is employed;

(C) is pursuing a course of study leading to a degree or certificate in athletic training from an accredited college or university and is performing duties that

are a part of the supervised course of study, and if such person is designated by a title which clearly indicates his or her status as a student or trainee;

(D) has applied in writing to the Department for a license and has complied with all the provisions of Section 7 of this Act except the passing of the examination to be eligible to receive such a license. In no event shall this exemption extend to any person for longer than six months;

(E) is an athletic trainer from another nation, state or territory from performing his duties for his respective non-(state) based team or organization, so long as he restricts his duties to his team or organization during the course of his team's or organization's stay in this state;

(F) provides gratuitous care to friends or family members;

(G) is a coach or physical education instructor in the performance of his duties;

Nothing in this Act shall be construed to prevent any person licensed under this Act and whose license is in good standing, or any association, corporation, or partnership from advertising, describing, or offering to provide athletic training, or billing for athletic training if the athletic training services are provided by a person licensed under this Act and practicing within the scope of that license.

Nothing in this Act shall be construed as authorizing a licensed athletic trainer to practice medicine, or any of it branches, unless so licensed by the State of (state).

This Act shall become effective (date).

CHAPTER VI
SUMMARY AND CONCLUSIONS

Summary

One of the roles of the government is the protection of the public's health, safety, and general welfare. Occupational licensing is one of the most common examples of this governmental function. This is justified as a governmental role because the general public is not equipped to judge the competence of the practitioner. This is particularly true among the health professions.

The athletic training profession has recently been included among the allied health occupational groups receiving state regulation. At the time of this research study, there were 26 states that had a practice act to regulate athletic trainers. Twelve states regulated through licensure laws, 5 states required certification, 5 states exempted athletic trainers from other health profession acts, and 4 states had registration requirements for athletic trainers. The NATA has continued to be a strong advocate of state regulation of the athletic training profession.

It was the purpose of this study to analyze the effectiveness of athletic training legislation in protecting

the public from harm. In the initial phase of the research, the investigator conducted a comprehensive analysis of the practice acts of the states that regulate athletic training. Criteria were determined to classify a practice act as excellent, good, or fair. An expert jury was used to validate the categorization of the athletic training practice acts, as well as the identification of the criteria to determine the classification.

The practice acts of Illinois, Louisiana, Massachusetts, Mississippi, North Dakota, Ohio, and South Dakota were categorized as excellent. The athletic training legislation for Delaware, Georgia, Kentucky, Missouri, Nebraska, New Jersey, South Carolina, and Tennessee were identified in the good classification. The practice acts rated as being in the moderate category included those from Arizona, Colorado, Connecticut, Hawaii, Idaho, New Hampshire, New Mexico, Oklahoma, Pennsylvania, Rhode Island, and Texas.

Of the seven states identified in the excellent category, five were states that have licensure of athletic training. However, licensure is not necessarily synonymous with quality in terms of athletic training practice acts. While five of the 12 states that license athletic trainers were classified as excellent, three were in the good category, and four were classified as moderate. A significant finding was that all five of the states that

regulate athletic training through an exemption were all classified in the moderate category.

Subsequent to the classification, the second phase of this study was to determine if state regulation of athletic training met the government function of protecting the public from harm. The results of testing the five research hypotheses are presented in the following paragraphs.

Hypothesis 1, "there is no difference in catastrophic injury rates between those states that regulate athletic training and those that do not" was rejected. Fatality and disability data was obtained from the National Federation of State High School Associations, as well as sports-related spinal cord injury data from the National Spinal Cord Injury Center. Analysis indicated a greater number of catastrophic injuries occurring in states with no state regulation of athletic trainers than in those states with regulation. Particularly compelling were the catastrophic injuries occurring in the "window" period concerning the high school injuries.

Hypothesis 2, "there is no difference between states that regulate athletic training and those that do not in level of harm to the public as measured by malpractice insurance rates", was not rejected. The company which is the primary underwriter of professional liability insurance for athletic trainers makes no distinction for the premiums

for this insurance in terms of practicing in a state that does or does not credential the athletic trainer.

Hypothesis 3, "there is no indication of harm to the general public as measured by the number of incidents referred to by the individual states in the initial legislation application or sunrise hearings" was not rejected. Public protection is nearly always used as a rationale for any occupational group seeking state licensure. This was true regarding athletic training regulation. However only five specific incidents (all in one state) were able to be documented supporting public protection as justification in the athletic training practice act initial application.

Hypothesis 4, "there is no indication of harm to the general public as measured by the number of sanctions levied against athletic trainers by state regulatory boards", was rejected. There has not been a overwhelming number of sanctions delivered against athletic trainers by state regulatory Boards. However in those states where sanctions have been imposed, the Boards have definitely focused on issues of public protection, safety and welfare.

Hypothesis 5, "there is no difference between states that regulate athletic training and those that do not in level of harm to the public as measured by the number of legal cases in which an athletic trainer was negligent or

liable", was not rejected. Computerized legal databases identified only eighteen cases in which an athletic trainer was referred to in the decision. Furthermore, an athletic trainer was named as a defendant in only 10 of the 18 cases. Of those, there were only two cases in which the athletic trainer was found liable. One was in a state which credentials athletic trainers and one without state regulation. In none of the ten cases, did the issue of state regulation arise.

A further purpose of this research was the development of criteria for model athletic training legislation focusing on the protection of the public. This was the third phase of this research study. The criteria will be discussed further in the conclusion. The model athletic training legislation was presented in Chapter V.

Conclusions

The analysis in this research study has indicated athletic training regulation has been only moderately successful in terms of protecting the public health, safety, and welfare. However, this should not preclude the regulation of athletic trainers in other states. Athletic training practice acts can, and should be, written to protect the public from harm. The following criteria are presented to facilitate this important justification in state credentialing of the profession.

Criterion No. 1: The practice act should include a definition of the athletic trainer. This will identify the athletic trainer as a qualified allied health professional.

Criterion No. 2: The practice act should include a definition of athletic training. This will identify the scope of practice for the athletic trainers, with specific duties and responsibilities outlined. All six of the athletic training domains should be specifically described as part of the scope of practice. This is also the appropriate area to include nontraditional sites as practice settings for the athletic trainer.

Criterion No. 3: The practice act should identify a physician as the athletic trainer's supervisor. As an allied health professional, an athletic trainer will require supervision to be licensed. This should be specified to only be a physician (M.D. or D.O.).

Criterion No. 4: The practice act should establish a regulatory board for the profession. The duties and responsibilities of the board need to be identified. It is essential that the board be provided with the authority for disciplinary actions and sanction. Specific grounds for refusal to issue or renew a license, as well as for license suspension or revocation should be identified.

Criterion No. 5: The practice act should identify educational qualifications for the license applicant. In addition to being a college graduate, specific academic

course requirements should be identified. These should be at least equivalent to the requirements for graduation from an accredited athletic training curriculum.

Criterion No. 6: The practice act should also specify clinical education requirements. At a minimum, this should be 800 hours of clinical experience over a two year period under the supervision of a certified athletic trainer. At least 25% of the clinical hours must have been obtained in working with high risk sports (football, soccer, hockey, wrestling, basketball, gymnastics, lacrosse, volleyball, and/or rugby).

Criterion No. 7: The practice act should include title protection for the athletic trainer. This provides the practitioner exclusive claim to the title, letters and abbreviations to be identified as a licensed athletic trainer.

Criterion No. 8: The practice act should indicate that the applicant must pass an examination to ensure that the individual possesses minimal knowledge, skills, and abilities necessary within the profession.

Criterion No. 9: The practice act should identify requirements for the license to be renewed. Specific continuing education units should be required. Additionally, a periodic renewal examination should be required. A renewal exam is an extremely uncommon feature in occupational licensing, but as suggested by Shimberg

(1985) and Vertiz (1985) a renewal examination to demonstrate continued competency should be imperative in protecting the public from harm.

Criterion No. 10: The practice act should identify specific reciprocity requirements for a license to be granted to an applicant who holds a credential from another state. The requirements to obtain the credential from the other state must be comparable to the qualifications required for state licensure.

Athletic training practice acts may also include sections pertaining to grandfathering, board membership, licensing fees, hearings, billing for services, and various exemptions. However, these do not pertain to safeguarding the public safety, and consequently are not included in the requisite criteria list.

Further Research

This research study has provided important results regarding state regulation of the athletic training profession. However, there are still many areas to yet be investigated.

Other injury data need to be collected and analyzed to determine the influence of athletic training regulation. Of particular interest, would be injury data at the collegiate level. Nearly all colleges and universities have the

services of an athletic trainer, as compared to high schools where certified athletic trainers are not as commonly found. Therefore, the collegiate data would more accurately compare the affect of state legislation of athletic trainers on protecting the public, versus no state regulation of the profession. A prospective study would need to be designed to elicit this data, because it cannot be currently determined by retrospective analysis.

There is a need for continued monitoring of legal decisions involving athletic trainers. There were only a very few cases involving athletic trainers at the time of this study. However, as more states regulate athletic trainers and practice settings become more diverse, exposure to litigation will likely increase.

Any further studies investigating state regulations of athletic training obviously need to include the additional states that have enacted athletic training practice acts. As the nation examines health care reform and the NATA strongly advocates pursuing state regulation, many state athletic training associations have made this issue a priority. During the course of this study the states of Alabama, Indiana, Iowa, Florida, Minnesota, and Oregon passed bills regulating athletic trainers. New York also passed a bill, however it had not yet been enacted. An athletic training bill was pending in the state of Washington.

In conclusion, Thelin (1993) stated that in his opinion current research from graduate programs in higher education has not sufficiently addressed issues of public policy. He stated that faculty and doctoral students should take a greater leadership role in analyzing matters of public policy and legislation, including concerns of health care. This study is presented as an example of a research investigation which may be used by athletic trainers and other allied health professionals as an example or a foundation, for continued research analyzing public policy.

APPENDIX A

STATE ATHLETIC TRAINING BOARD SURVEY

STATE_____

What justification was used to support the need for athletic training regulation in your state, particularly in regards to protecting the public from harm?

Was there a "sunrise hearing" prior to athletic training legislation being enacted in your state? YES / NO

Has there been, or will there be, a "sunset hearing" in relation to the athletic training legislation in your state? YES / NO

If yes, year this occurred or will occur? _____

Findings of "sunset" review?

How many sanctions have been levied against athletic trainers since the passage of your state's legislation?_____

Please provide the nature of the violation for each of the sanctions given. (Do not identify individuals involved, just the type of violation.)

Please return this survey in the enclosed envelope. Thanks again for your assistance.

APPENDIX B

SURVEY LETTER

Central Michigan University
Sports Medicine/Rose 145

October 25, 1993

Board of Athletic Trainers
O'Neal Building
P.O. Box 1401
Dover, DE 19903

Dear Sirs:

My name is David Kaiser. I am the athletic training curriculum director at Central Michigan University.

I am currently conducting a research study investigating state regulation of athletic training. I am interested in obtaining specific information from your state's regulatory board pertaining to safeguarding the public welfare. Enclosed is a short survey to assess that information.

I appreciate your immediate attention to this survey. Please return the completed survey to me in the enclosed self-addressed return envelope, a stamp is not necessary.

THANK YOU for a few minutes of your time and your valuable assistance. If you have any questions, you may contact me at (517) 774-6687.

Sincerely,

David A. Kaiser, ATC
Rose 145
Central Michigan University
Mt. Pleasant, MI 48859

APPENDIX C

EXPERT JURY CORRESPONDENCE

November 19, 1993

Mr. Ed Crowley, ATC
Head Athletic Trainer
Carver Hawkeye Arena
University of Iowa
Iowa City, IA 52240

Dear Ed:

I again want to express my appreciation to you for your willingness to review this material regarding state regulation of athletic training and assisting with my doctoral dissertation. As I mentioned to you in our phone conversation, part of my research study involves making a qualitative analysis of current athletic training practice acts, specifically in respect to protecting the public from harm. The following 12 criteria will be used to make that assessment:

1) A definition of athletic training and/or athletic trainer.

2) At least four of the six athletic training domains identified [prevention, recognition/evaluation, management/treatment, rehabilitation, organization/administration, education/counseling].

3) Supervision by a physician.

4) Establishment of a regulatory board.

5) Educational qualifications.

6) Authority given for sanctions and disciplinary actions.

7) Continuing education requirements.

8) Applicant must pass examination to earn state credential.

9) Identification of nontraditional sites as practice settings.

10) Renewal examination required.

11) Reciprocity with other states.

12) Allows billing for athletic training services.
In order for a state's practice act to be classified in the "good" category, at least 9 of the 12 criteria have to be

included. Additionally, the first seven listed criteria have to be included as part of the minimum nine criteria for a practice act to be classified in the "good" category.

To be ranked in the "moderate' classification, a practice act must include at least 7 of the 12 criteria. The first three criteria, and three of the next four criteria have to be identified for inclusion in the "moderate" category.

An athletic training practice act that addresses less than seven of the identified criteria will be classified as "poor".

If you support this classification system for my qualitative analysis, please advise me of such by mail, fax, or phone. Any other feedback or input is welcomed. Again, thanks for your invaluable assistance.

Yours in health,

David A. Kaiser, ATC
Sports Medicine Curriculum Director

Rose 145
Central Michigan University
Mt. Pleasant, MI 48859
(517) 774-6687
(517) 774-5391 (FAX)

National Athletic Trainers' Association
2952 Stemmons Freeway
Dallas, Texas 75247

David A. Kaiser, ATC
Sports Medicine Curriculum Director
Rose 145
Central Michigan University

November 29, 1993

Dear David,

I have had time to review your rating criteria for athletic training regulatory acts. In general, your criteria appear to be valid for protecting the public from harm. There is one area, though, where duplication of criteria may be present. There is also one other criteria that you may wish to add to the roster. Give these suggestions some thought.

Through legislation, if a regulatory board is determined to be necessary, it is given the authority to apply sanctions and/or order disciplinary actions. While one can argue that the basic function of the board is to process applications and collect fees, the real function of the board (or advisory council) is to protect the public by insuring that practicers meet standard requirements and then practice the profession within the confines of the law as it is written. Criteria 4 and 6 may be duplications unless you are trying to differentiate between those states that place criminal penalties (fines/jail terms) in effect for violation of the practice act versus those states that merely remove the privilege of practice from violators. There are only two states that I'm aware of that have criminal penalties attached to the athletic training practice acts (Illinois and Minnesota).

One criteria that you may wish to add to the roster is title protection. Title protection works two ways. It protects the public by insuring that those who use the title actually have the necessary knowledge and skills to perform the duties of the profession. Title protection also prevents those who perform the duties of the profession from avoiding the restrictions of the practice act merely by naming themselves something else. Title protection safeguards the public and the profession from unscrupulous practicers.

You may also wish to include endorsement with

reciprocity from other states. Endorsement means that a state may sanction or approve the application of an credentialed athletic trainer from another state without seeking reciprocity from the second state.

In your review of state laws, please remember that Minnesota, Alabama, Oregon and Indiana have recently passed athletic training regulatory acts. As a favor, would it be too much to ask to have a copy of your dissertation for my files? It sound as if it will be a good addition to the library. In any respect, good luck!

Sincerely,

Dan Campbell, PT/ATC
Chair
Governmental Affairs Committee

Iowa Hawkeyes
The University of Iowa
340 Carver-Hawkeye Arena
Iowa City, Iowa 52242-1020

December 1, 1993

David A. Kaiser, ATC
Sports Medicine Curriculum Director
Rose 145
Central Michigan University
Mt. Pleasant, MI 48859

Dear David:

The 12 criteria and your classification seems appropriate at this time. This is a very timely research project, especially for those states who are presently working on a Bill. I commend you on your hard work. If there is anything else I can do please let me know.

Sincerely,

Edward T. Crowley, LPT, ATC
Director Athletic Training Services
The University of Iowa

ETC/sds

Hughston Sports Medicine Foundation, Inc.
6262 Hamilton Road
P.O. Box 9517
Columbus, Georgia 31908-9517

January 5, 1994

Mr. David Kaiser
Sports Medicine Curriculum Director
Rose 145
Central Michigan University
Mt. Pleasant, Michigan 48859

Dear David:

I support your classification system of state laws regulating the practice of athletic training; however, I do have some clarifying questions and comments. I know it is not your intent, but I hope this rating system will not reflect negatively on the efforts of the athletic trainers who were involved with the passage of their state's law. In virtually all cases, the law reflects the best efforts of these athletic trainers who usually face formidable opposition. I don't believe there are any athletic trainers who would intentionally try to pass a "weak" regulatory law. In fact, there are instances when the proposed bill has been pulled rather than have an ineffective law pass that has been changed extensively to appease the opposition. Indeed, your rating system will be a valuable service to guide athletic trainers' decisions on whether or not to pursue legislation that will be rated in the "moderate" or "poor" category.

Of course, as with any law, the true test is found in our judicial system. The law's effectiveness will be determined by the outcome of litigious action in the courts.

My questions and comments pertaining to the twelve criteria are as follows:

Criteria #1. Will you rank the various definitions found? What is the ideal definition?

Criteria #3. There are different terms used for supervision ie, "under the direction," "referral by" etc. The connotation is the amount of direct supervision versus

daily contact by telephone. Some states allow for non-MD supervision.

Criteria #8. Is the examination NATABOC or state specific? This can affect standards for reciprocity.

Criteria #9. Some may not specify traditional versus non-traditional settings which allows for both without using what sometimes becomes inflammatory wording.

Criteria #10. A renewal examination seems to be above and beyond NATABOC standards.

Criteria #12. Billing for services may not be legislated in some states but won't necessarily preclude them from pursuing third party reimbursement. The fact that there is a law that regulates athletic training will allow insurance companies to pay for services if they choose to do so. I believe having a state law is a mandatory prerequisite for athletic trainers to be included on a provider list (National Health Care Reform).

Possible #13. Should residency requirements be a factor? For example, one state requires residency for licensure and another requires that you practice in the state. Is this important?

David, I support your analysis of athletic training laws. these questions and comments reflect my thoughts on the matter. I hope they help in a constructive manner.

Please contact me with any questions. Good luck with your research. Be sure to send me your results.

Sincerely,

Keith Webster, M.A., A.T.,C.
Director of Sports Relations

KW:jfs

APPENDIX D

HIGH SCHOOL CATASTROPHIC INJURY CORRESPONDENCE

Central Michigan University
Sports Medicine/Rose 145

May 3, 1993

Bob Kanaby
Executive Director
11724 NW Plaza Circle
Box 20626
Kansas City, MO 64195-0626

Dear Mr. Kanaby:

My name is David Kaiser and I am the director of the Sports Medicine Curriculum at Central Michigan University.

I am currently involved in a research study investigating athletic training licensure. I am comparing injury statistics in those states that license athletic training with those that have no state regulation. I have contacted Dr. Fred Mueller regarding catastrophic injury statistics. He has indicated to me that he has the data available on a state by state basis, but he is unable to release it to me in that form (because of state officials concern in being identified). He referred me to Dick Schindler to obtain permission for him to release the data in that form. Mr. Schindler in turn, has indicated that I need to contact you regarding this matter.

While I am desirous of obtaining the catastrophic injury statistics on a state identified basis, my research would not identify the individual states involved. The data would be reported simply as two variable groups - a compilation of those states that have athletic training licensure and those states that do not regulate the profession.

If I can answer any questions regarding this investigation, or if further clarification is needed, please contact me at (517) 774-6687 or (517) 772-9346. Thank you very much for your assistance with this research project.

Cordially,

David A. Kaiser, MPE, ATC
Sports Medicine Curriculum Director

National Federation of State High School Associations
11724 NW Plaza Circle
P.O. Box 20626
Kansas City, Missouri 64195-0626

May 14, 1993

David Kaiser, MPE, ATC
Central Michigan University
Sports Medicine Rose 145
Mount Pleasant, Michigan 48859

Dear David,

This letter is in response to your inquiry to Bob Kanaby, Executive Director of the National Federation of State High School Associations regarding catastrophic injury statistics.

Permission is granted as per your request and Dr. Fred Mueller has been authorized to supply you with the data you requested. However, in keeping with our policy, you may not identify individual states, schools, or the athletes involved in your report or study summary. The National Federation, as well as Dr. Mueller, has a very difficult time getting any information relative to catastrophic injuries. In order to get a limited amount, we make it very clear to our state associations, and they in turn to their member schools, that the state, school, and individual name will not be released to the media, etc.

The National Federation would like to ask you to send a copy of your final report to us when you are finished. If we can be of further help to you, please feel free to contact me.

Sincerely,

Dick Schindler
Assistant Director

DDS:jdm

c: Robert Kanaby
Dr. Fred Mueller

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BIOGRAPHICAL SKETCH

David Allen Kaiser was born May 22, 1958 in Riverton, Wyoming. He was an honor graduate from Ranum High School in Westminster, Colorado, in 1976. He was listed in Who's Who Among Students in America's Junior Colleges in 1981 while attending the Community College of Denver. Mr. Kaiser went on to graduate magna cum laude with a B.S. degree in physical education-athletic training from Brigham Young University in April 1984. In 1986 he was awarded a Master of Physical Education degree from the University of Florida.

Mr. Kaiser is a certified athletic trainer, and is a member of the National Athletic Trainer's Association, Great Lakes Athletic Trainer's Association, and the Michigan Athletic Trainer's Society. While in Gainesville, he was the head athletic trainer at Santa Fe Community College, as well as a graduate assistant trainer at the University of Florida Student Injury Care Center. Since 1988, Mr. Kaiser has been the program director of the accredited undergraduate athletic training curriculum at Central Michigan University. In conjunction with his responsibilities in administering the athletic training curriculum, he is an assistant professor in the Physical

Education and Sport Department, as well as being a staff athletic trainer in CMU's Athletics Department.

Publications which Mr. Kaiser has authored or co-authored include "Student Trainer Fundraising" in MATS Newsline, 1993; "Preventing Steroid Use--The Role of the Health/Physical Educator" in The Journal of Physical Education, Recreation, and Dance, 1992; "An Infection Control Policy for the Athletic Training Setting" in Athletic Training, 1991; "Managing Injuries in Collegiate Recreational Sports", in The National Intramural and Recreational Sports Association Journal, 1990; and "Certified Athletic Trainers in Our Secondary Schools: The Need and the Solution" in Athletic Training, 1988. Additionally he has given numerous presentations at the state, regional and national level. Mr. Kaiser was recognized in 1989 by the Outstanding Young Man of America and was included in the 1993-94 edition of Who's Who in the Midwest.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Education.

James L. Wattenbarger, Chair
Distinguished Service Professor of
Educational Leadership

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Education.

James W. Hensel
Professor of Educational Leadership

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Education.

Christine Boyd Stopka
Associate Professor of Exercise and
Sport Sciences

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Education.

Ronald A. Siders
Associate Professor of Exercise and
Sport Sciences

This dissertation was submitted to the Graduate Faculty of the College of Education and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Education.

December 1994

Roderick J. McDavis

Dean, College of Education

Dean, Graduate School